

**FEDERALLY ENFORCEABLE STATE  
OPERATING PERMIT (FESOP)  
OFFICE OF AIR QUALITY**

**Grissom Air Reserve Base  
Grissom, Indiana 46971-5000**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: F 103-13875-00008	
Original signed by Paul Dubenetzky, Issued by: Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: September 11, 2001  Expiration Date: September 11, 2006

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## SECTION A

## SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in Conditions A.1 through A.3 are descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

### A.1 General Information [326 IAC 2-8-3(b)]

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The Permittee owns and operates a stationary military base source.

Authorized Individual:	Brigadier General Christopher M. Joniec
Source Address:	Grissom Air Reserve Base, Grissom, Indiana 46971-5000
Mailing Address:	434 SPTG/CEV, Room 124, 641 Readiness Circle, Grissom, Indiana 46971-5000
General Source Phone Number:	(765) 688-4770
SIC Code:	9711
County Location:	Miami
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit (FESOP) Minor Source, under PSD Rules; Minor Source, Section 112 of the Clean Air Act

### A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

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This stationary source consists of the following emission units and pollution control devices:

- (a) One (1) spray paint booth, located in building 453, constructed in 1989, equipped with ten (10) high volume low pressure (HVLP) spray guns, two HVLP (2) stencil mini spray guns and one (1) electrostatic HVLP spray gun, capacity: 1 aircraft panel per hour.
- (b) One (1) interior parts paint area, located in one of the following nose docks (Nose Docks 1 through 6), using the HVLP spray applicators, rollers and brushes existing at building 453, used for coating the interior parts of planes that cannot be removed for painting at building 453, with coating operations beginning in the summer of 1996, capacity: 12 planes per year.
- (c) One (1) airplane exterior paint area, located in one of the following nose docks (Nose Docks 1 through 6), using the HVLP spray applicators, rollers and brushes existing at building 453, with coating operations beginning in August of 1995, capacity: 52 airplane exteriors per year.
- (d) One (1) grit blast room, located in building 426, constructed in 1989, equipped with a bag-house, capacity: 767 pounds of grit per hour.
- (e) One (1) bulk POL system, constructed in 1990, consisting of the following:
  - (1) Six (6) horizontal underground JP-8 storage tanks, known as 736-1, 736-2, 736-3, 736-4, 736-5 and 736-6, installed in 1954, capacity: 50,000 gallons, each.
  - (2) Four (4) vertical above ground JP-8 storage tanks, known as 400, 401, 402 and 403 installed in 1957, capacity: 630,000 gallons, each.

- (3) One (1) vertical above ground JP-8 storage tank, known as 406, installed in 1961, capacity: 1,050,000 gallons.
- (4) Two (2) horizontal above ground storage tanks, known as 383 and 384, installed in 1991, capacity: 25,000 gallons of propylene glycol, each.

A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour, propane or liquified petroleum gas or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) British thermal units per hour, and fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) British thermal units per hour and firing fuel containing less than five-tenths (0.5) percent sulfur by weight, including, but not limited to, the following (all boilers are specified):
  - (1) Twenty-nine (29) boilers and seven (7) water heaters, constructed in 2000, consisting of the following: [326 IAC 6-2-4]
    - (A) One (1) natural gas fired boiler, identified as Boiler 100, located in Building 100, maximum capacity: 0.650 million British thermal units per hour.
    - (B) One (1) natural gas fired boiler, identified as Boiler 209A, located in Building 209, maximum capacity: 3.0 million British thermal units per hour.
    - (C) One (1) natural gas fired boiler and one (1) water heater, located in Building 325, maximum capacity: 1.05 million British thermal units per hour, total.
    - (D) One (1) natural gas fired boiler and one (1) water heater, located in Building 327, maximum capacity: 2.0 million British thermal units per hour, total.
    - (E) One (1) natural gas fired boiler and one (1) water heater, located in Building 328, maximum capacity: 2.0 million British thermal units per hour, total.
    - (F) One (1) natural gas fired boiler and one (1) water heater, located in Building 329, maximum capacity: 2.0 million British thermal units per hour, total.
    - (G) One (1) natural gas fired boiler, identified as Boiler 330, located in Building 330, maximum capacity: 0.850 million British thermal units per hour.
    - (H) One (1) natural gas fired boiler and one (1) water heater, located in Building 331, maximum capacity: 2.0 million British thermal units per hour.
    - (I) One (1) natural gas fired boiler and one (1) water heater, located in Building 332, maximum capacity: 2.0 million British thermal units per hour, total.
    - (J) One (1) natural gas fired boiler and one (1) water heater, located in Building 333, maximum capacity: 2.0 million British thermal units per hour, total.

- (K) Four (4) natural gas fired boilers, located in Building 426, maximum capacity: 0.35 million British thermal units per hour.
  - (L) One (1) natural gas fired boiler, identified as Boiler 427, located in Building 427, maximum capacity: 0.9 million British thermal units per hour.
  - (M) One (1) natural gas fired boiler, identified as Boiler 430, located in Building 430, maximum capacity: 0.450 million British thermal units per hour.
  - (N) One (1) natural gas fired boiler, identified as Boiler 435, located in Building 435, maximum capacity: 0.85 million British thermal units per hour.
  - (O) One (1) natural gas fired boiler, identified as Boiler 431, located in Building 431, maximum capacity: 0.450 million British thermal units per hour.
  - (P) One (1) natural gas fired boiler, identified as Boiler 448, located in Building 448, maximum capacity: 0.650 million British thermal units per hour.
  - (Q) One (1) natural gas fired boiler, identified as Boiler 453, located in Building 453, maximum capacity: 0.105 million British thermal units per hour.
  - (R) One (1) natural gas fired boiler, identified as Boiler 596A, located in Building 596, maximum capacity: 1.20 million British thermal units per hour.
  - (S) One (1) natural gas fired boiler, identified as Boiler 596B, located in Building 596, maximum capacity: 0.040 million British thermal units per hour.
  - (T) One (1) natural gas fired boiler, identified as Boiler 663, located in Building 663, maximum capacity: 1.8 million British thermal units per hour.
  - (U) One (1) natural gas fired boiler, identified as Boiler 667, located in Building 667, maximum capacity: 0.6 million British thermal units per hour.
  - (V) One (1) natural gas fired boiler, identified as Boiler 668a, located in Building 668, maximum capacity: 0.450 million British thermal units per hour.
  - (W) One (1) natural gas fired boiler, identified as Boiler 670, located in Building 670, maximum capacity: 0.65 million British thermal units per hour.
  - (X) Three (3) natural gas fired boilers, located in Building 671, maximum capacity: 0.66 million British thermal units per hour, total.
- (2) One (1) natural gas fired boiler, identified as 668b, constructed in February 2001, maximum capacity: 0.45 million British thermal units per hour. [326 IAC 6-2-4]
  - (3) One (1) natural gas and propane fired boiler, identified as 233, constructed in 1999, maximum capacity: 0.45 million British thermal units per hour. [326 IAC 6-2-4]
  - (4) One (1) natural gas and No. 2 fuel oil fired boiler, identified as 440, constructed in 1992, maximum capacity: 0.151 million British thermal units per hour. [326 IAC 6-2-4]
  - (5) One (1) No. 2 fuel oil fired boiler, identified as 591b, constructed in 1992, maximum capacity: 0.25 million British thermal units per hour. [326 IAC 6-2-4]

- (6) One (1) natural gas fired boiler, identified as 563a, constructed in 1991, maximum capacity: 0.40 million British thermal units per hour. [326 IAC 6-2-4]
  - (7) One (1) natural gas fired boiler, identified as 563b, constructed in 1979, maximum capacity: 0.08 million British thermal units per hour. [326 IAC 6-2-3]
  - (8) One (1) natural gas fired boiler, identified as 593a, constructed in 1992, maximum capacity: 0.40 million British thermal units per hour. [326 IAC 6-2-4]
  - (9) One (1) natural gas fired boiler, identified as 593b, constructed in 1989, maximum capacity: 0.40 million British thermal units per hour. [326 IAC 6-2-4]
  - (10) One (1) natural gas fired boiler, identified as 595, constructed in 1988, maximum capacity: 0.40 million British thermal units per hour. [326 IAC 6-2-4]
  - (11) One (1) natural gas fired boiler, identified as 597, constructed in 1985, maximum capacity: 1.611 million British thermal units per hour. [326 IAC 6-2-4]
  - (12) One (1) natural gas or propane fired boiler, identified as 600b, constructed in 1992, maximum capacity: 1.50 million British thermal units per hour. [326 IAC 6-2-4]
  - (13) One (1) No. 2 fuel oil fired boiler/ hot water heater, identified as 600c, constructed in 1992, maximum capacity: 0.40 million British thermal units per hour. [326 IAC 6-2-4]
  - (14) One (1) natural gas or propane fired boiler, identified as 669, constructed in 1998, maximum capacity: 0.90 million British thermal units per hour. [326 IAC 6-2-4]
  - (15) One (1) natural gas or propane fired boiler, identified as 683, constructed in 1993, maximum capacity: 0.40 million British thermal units per hour. [326 IAC 6-2-4]
  - (16) One (1) natural gas or propane fired boiler, identified as 687, constructed in 1997, maximum capacity: 1.703 million British thermal units per hour. [326 IAC 6-2-4]
  - (17) One (1) propane fired boiler, identified as 715, constructed in 1993, maximum capacity: 0.08 million British thermal units per hour. [326 IAC 6-2-4]
  - (18) One (1) boiler, fired by natural gas, identified as B592, constructed in 1997, equipped with a low NO<sub>x</sub> burner, capacity: 5.02 million British thermal units per hour.
  - (19) One (1) boiler, identified as boiler 591a, constructed in 1987, fired by natural gas, capacity: 2.049 million British thermal units per hour.
  - (20) One (1) boiler, identified as boiler 600a, constructed in 1986, fired by natural gas as a primary fuel and propane as a backup fuel, capacity: 2.025 million British thermal units per hour.
  - (21) One-hundred and ten (110) natural gas fired infrared heaters, maximum capacity: 20.70 million British thermal units per hour, total.
- (b) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6. Several cold cleaner degreasing units using only non-halogenated solvents. [326 IAC 8-3-2][326 IAC 8-3-5]



- (c) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment. [326 IAC 6-3]
- (d) Grinding and machining operations controller with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations. [326 IAC 6-3]
- (e) Activities or categories of activities with HAP emissions greater than 1 pound per day but less than 12.5 pounds per day or 2.5 tons per year of any combination of HAPs:
  - (1) Installation of compass and global positioning equipment and replacing radar equipment on Air Force planes in Nose Dock 2 (including painting operations). [326 IAC 6-3]
  - (2) Fuel cell repair
  - (3) JP-8 fuel handling
  - (4) Low point draw box remediation
- (f) The following activities or categories with emissions below insignificant thresholds:
  - (1) Four (4) media blasters, equipped with 99% efficient bag filters, operating an average of three (3) hours per day. [326 IAC 6-3]
  - (2) One (1) firing range bullet trap equipped with dust collector. [326 IAC 6-3]
  - (3) Two (2) propylene glycol above ground storage tanks, identified as 381 and 382, constructed in 1991, capacity: 25,000 gallons, each.[326 IAC 12][40 CFR 60.116b]
  - (4) One (1) fuel oil tank, identified as 235, installed in 1976, capacity: 420,000 gallons.
  - (5) One (1) diesel tank, identified as 380, installed in 1991, capacity: 10,000 gallons.
  - (6) One (1) diesel tank, identified as 447, installed in 1995, capacity: 10,000 gallons.
  - (7) One (1) diesel aboveground storage tank, identified as 593B, installed in 2001, capacity: 2,000 gallons.
  - (8) One (1) JP-8 aboveground storage tank, identified as 593A, installed in 2001, capacity: 2,000 gallons.
  - (9) One (1) diesel underground storage tank, identified as 419C, installed in 1987, capacity: 10,000 gallons.
  - (10) Two (2) fuel oil above ground storage tanks, identified as 683 and 440, capacity: less than 1,000 gallons.
  - (11) One (1) propane storage tank, capacity: 10,000 gallons.

- (12) One (1) propane storage tank, capacity: 4,000 gallons.
- (13) Several propane tanks equal or less than 1,000 gallons.
- (14) Twenty-two (22) diesel above ground storage tanks, capacity: less than 1,000 gallons.
- (15) One (1) JP-8 above ground storage tank, identified as 404, constructed in 1995, capacity: 500 gallons.
- (16) One (1) used oil storage tank, identified as 420, constructed in 1993, capacity: 300 gallons.
- (g) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 British thermal units per hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 British thermal units per hour.
- (h) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons, consisting of two (2) gasoline underground storage tanks, identified as 419A and 419B, capacity: 10,000 gallons, each.
- (i) Petroleum fuel other than gasoline dispensing facility, having a storage tank capacity less than or equal to ten thousand five hundred (10,500) gallons, and dispensing three thousand five hundred (3,500) gallons per day or less.
- (j) VOC and HAP storage tanks with capacities less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.
- (k) Groundwater oil recovery wells.
- (l) Any operation using aqueous solutions containing less than one percent (1%) by weight of VOCs excluding HAPs.
- (m) Stockpiled soils from soil remediation activities that are covered and waiting transport for disposal.
- (n) Paved and unpaved roads and parking lots with public access.
- (o) Asbestos abatement projects regulated by 326 IAC 14-10.
- (p) Purging of gas lines and vessels that is related to routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process.
- (q) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment.
- (r) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (s) On-site fire and emergency response training approved by the department.

(t) Emergency generators as follows:

Gasoline generators not exceeding 110 horsepower.

Diesel generators not exceeding 1,600 horsepower.

Natural gas turbines or reciprocating engines not exceeding 16,000 horsepower.

A.4 FESOP Applicability [326 IAC 2-8-2]

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This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) for a Federally Enforceable State Operating Permit (FESOP).

A.5 Prior Permit Conditions

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(a) This permit shall be used as the primary document for determining compliance with applicable requirements established by previously issued permits.

(b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, including any term or condition from a previously issued construction or operation permit, IDEM, OAQ, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued.

## GENERAL CONDITIONS

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a FESOP under 326 IAC 2-8.

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2, and 326 IAC 2-7) shall prevail.

This permit is issued for a fixed term of five (5) years from the original date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date.

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

This permit does not convey any property rights of any sort, or any exclusive privilege.

(a) The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to:

The submittal by the Permittee does require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

- (b) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the “authorized individual”

as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ, copies of records required to be kept by this permit or, for information claimed to be confidential, the Permittee may furnish such records directly to the U. S. EPA along with a claim of confidentiality.[326 IAC 2-8-4(5)(E)]

- (c) The Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.9 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

B.10 Compliance with Permit Conditions [326 IAC 2-8-4(5)(A)] [326 IAC 2-8-4(5)(B)]

- (a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for:
  - (1) Enforcement action;
  - (2) Permit termination, revocation and reissuance, or modification; and
  - (3) Denial of a permit renewal application.
- (b) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- (c) An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

B.11 Certification [326 IAC 2-8-3(d)] [326 IAC 2-8-4(3)(C)(i)] [326 IAC 2-8-5(1)]

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by a authorized individual of truth, accuracy, and completeness. This certification, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification.
- (c) An authorized individual is defined at 326 IAC 2-1.1-1(1).

B.12 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than July 1 of each year to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
  - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
  - (2) The compliance status;
  - (3) Whether compliance was continuous or intermittent;
  - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and
  - (5) Such other facts as specified in Sections D of this permit, IDEM, OAQ, may require to determine the compliance status of the source.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

**B.13 Preventive Maintenance Plan [326 IAC 1-6-3] [326 IAC 2-8-4(9)] [326 IAC 2-8-5(a)(1)]**

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs), including the following information on each facility:
  - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) The Permittee shall implement the PMPs as necessary to ensure that failure to implement a PMP does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or contributes to any violation. The PMP does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (d) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

**B.14 Emergency Provisions [326 IAC 2-8-12]**

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-8-12.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describes the following:

- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
- (2) The permitted facility was at the time being properly operated;
- (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone No.: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section),  
or  
Telephone No.: 317-233-5674 (ask for Compliance Section)  
Facsimile No.: 317-233-5967

Failure to notify IDEM, OAQ, by telephone or facsimile within four (4) daytime business hours after the beginning of the emergency, or after the emergency is discovered or reasonably should have been discovered, shall constitute a violation of 326 IAC 2-8 and any other applicable rules. [326 IAC 2-8-12(f)]

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.
- (g) Operations may continue during an emergency only if the following conditions are met:
  - (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
  - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
    - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
    - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]

- (a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provision), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015



using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report.

The notification by the Permittee does require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:
  - (1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or
  - (2) Failure to implement elements of the Preventive Maintenance Plan unless such failure has caused or contributed to a deviation.

A Permittee’s failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred is a deviation.

- (c) Emergencies shall be included in the Quarterly Deviation and Compliance Monitoring Report.

**B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)] [326 IAC 2-8-7(a)] [326 IAC 2-8-8]**

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a FESOP modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:
  - (1) That this permit contains a material mistake.
  - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
  - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]
- (c) Proceedings by IDEM, OAQ, to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ, at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ, may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

**B.17 Permit Renewal [326 IAC 2-8-3(h)]**

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- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ, and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, IN 46206-6015

- (b) Timely Submittal of Permit Renewal [326 IAC 2-8-3]

- (1) A timely renewal application is one that is:

- (A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
- (B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

- (2) If IDEM, OAQ, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied.

- (c) Right to Operate After Application for Renewal [326 IAC 2-8-9]

If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ, any additional information identified as needed to process the application.

**B.18 Permit Amendment or Revision [326 IAC 2-8-10] [326 IAC 2-8-11.1]**

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- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.

- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

Any such application shall be certified by the "authorized individual" as defined by 326 IAC

2-1.1-1(1).

- (c) The Permittee may implement the administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

**B.19 Operational Flexibility [326 IAC 2-8-15]**

- (a) The Permittee may make any change or changes at this source that are described in 326 IAC 2-8-15(b) through (d), without prior permit revision, if each of the following conditions is met:

- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
- (2) Any approval required by 326 IAC 2-8-11.1 has been obtained;
- (3) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

- (4) The Permittee notifies the:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V  
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

- (5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-8-15(b) through (d) and makes such records available, upon reasonable request, to public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ, in the notices specified in 326 IAC 2-8-15(b), (c)(1), and (d).

- (b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-8-15(a) and the following additional conditions:

- (1) A brief description of the change within the source;
- (2) The date on which the change will occur;

- (3) Any change in emissions; and
- (4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) **Emission Trades** [326 IAC 2-8-15(c)]  
The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).
- (d) **Alternative Operating Scenarios** [326 IAC 2-8-15(d)]  
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ or U.S. EPA is required.

**B.20 Permit Revision Requirement** [326 IAC 2-8-11.1]

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A modification, construction, or reconstruction is governed 326 IAC 2 and 326 IAC 2-8-11.1.

**B.21 Inspection and Entry** [326 IAC 2-8-5(a)(2)] [IC 13-14-2-2]

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Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

**B.22 Transfer of Ownership or Operational Control** [326 IAC 2-8-10]

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- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

The application which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-11(b)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16]

- (a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Failure to pay may result in administrative enforcement action, or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-0425 (ask for OAQ, Technical Support and Modeling Section), to determine the appropriate permit fee.

## SECTION C SOURCE OPERATION CONDITIONS

Entire Source
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### Emissions Limitations and Standards [326 IAC 2-8-4(1)]

#### C.1 Overall Source Limit [326 IAC 2-8] [326 IAC 2-2]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

- (1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period.
- (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
- (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(b) Any change or modification that increases the potential to emit PM to 250 tons per year or more shall cause this source to become a major source pursuant to 326 IAC 2-2, PSD, and shall require prior OAQ approval.

(c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.

(d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

#### C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

#### C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1. 326 IAC

4-1-3(a)(2)(A) and (B) are not federally enforceable.

**C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2(3)]**

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and in 326 IAC 9-1-2. 326 IAC 9-1-2 is not federally enforceable.

**C.5 Fugitive Dust Emissions [326 IAC 6-4]**

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

**C.6 Operation of Equipment [326 IAC 2-8-5(a)(4)]**

Except as otherwise provided by statute, rule or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

**C.7 Stack Height [326 IAC 1-7]**

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. The provisions of 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4(d), (e), and (f), and 326 IAC 1-7-5(d) are not federally enforceable.

**C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]**

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management  
Asbestos Section, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

The notifications do not require a certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (e) **Procedures for Asbestos Emission Control**  
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-4 emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Indiana Accredited Asbestos Inspector**  
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement that the inspector be accredited, pursuant to the provisions of 40 CFR 61, Subpart M, is federally enforceable.

### **Testing Requirements [326 IAC 2-8-4(3)]**

#### **C.9 Performance Testing [326 IAC 3-6]**

- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ, not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.



## **Compliance Requirements [326 IAC 2-1.1-11]**

### **C.10 Compliance Requirements [326 IAC 2-1.1-11]**

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

## **Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]**

### **C.11 Compliance Monitoring [326 IAC 2-8-4(3)] [326 IAC 2-8-5(a)(1)]**

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

in writing, prior to the end of the initial ninety (90) day compliance schedule with full justification of the reasons for inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Unless otherwise specified in the approval for the new emissions unit, compliance monitoring for new emission units or emission units added through a permit revision shall be implemented when operation begins.

### **C.12 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]**

Any monitoring or testing performed required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63 or other approved methods as specified in this permit.

## **Corrective Actions and Response Steps [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]**

### **C.13 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68.215]**

If a regulated substance, subject to 40 CFR 68, is present at a source in more than a threshold quantity, 40 CFR 68 is an applicable requirement and the Permittee shall submit:

- (a) A compliance schedule for meeting the requirements of 40 CFR 68; or
- (b) As a part of the annual compliance certification submitted under 326 IAC 2-7-6(5), a certification statement that the source is in compliance with all the requirements of 40 CFR 68, including the registration and submission of a Risk Management Plan (RMP).

All documents submitted pursuant to this condition shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

C.14 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 2-8-4] [326 IAC 2-8-5]

- (a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. The compliance monitoring plan can be either an entirely new document, consist in whole of information contained in other documents, or consist of a combination of new information and information contained in other documents. If the compliance monitoring plan incorporates by reference information contained in other documents, the Permittee shall identify as part of the compliance monitoring plan the documents in which the information is found. The elements of the compliance monitoring plan are:
  - (1) This condition;
  - (2) The Compliance Determination Requirements in Section D of this permit;
  - (3) The Compliance Monitoring Requirements in Section D of this permit;
  - (4) The Record Keeping and Reporting Requirements in Section C (General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and
  - (5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAQ, upon request and shall be subject to review and approval by IDEM, OAQ. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee and maintained on site, and is comprised of:
    - (A) Reasonable response steps that may be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and
    - (B) A time schedule for taking reasonable response steps including a schedule for devising additional response steps for situations that may not have been predicted.
- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to take reasonable response steps may constitute a violation of the permit.
- (c) Upon investigation of a compliance monitoring excursion, the Permittee is excused from taking further response steps for any of the following reasons:
  - (1) A false reading occurs due to the malfunction of the monitoring equipment. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.
  - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied.
  - (3) An automatic measurement was taken when the process was not operating.

- (4) The process has already returned or is returning to operating within “normal” parameters and no response steps are required.
- (d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
- (e) All monitoring required in Section D shall be performed at all times the equipment is operating. If monitoring is required by Section D and the equipment is not operating, then the Permittee may record the fact that the equipment is not operating or perform the required monitoring.
- (f) At its discretion, IDEM may excuse the Permittee’s failure to perform the monitoring and record keeping as required by Section D, if the Permittee provides adequate justification and documents that such failures do not exceed five percent (5%) of the operating time in any quarter. Temporary, unscheduled unavailability of qualified staff shall be considered a valid reason for failure to perform the monitoring or record keeping requirements in Section D.

**C.15 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4] [326 IAC 2-8-5]**

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The documents submitted pursuant to this condition do not require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

**Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]**

**C.16 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]**

- (a) Records of all required data, reports and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

**C.17 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]**

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- (a) The source shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:  
  
Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years.

**Stratospheric Ozone Protection**

**C.18 Compliance with 40 CFR 82 and 326 IAC 22-1**

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Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

- (a) Persons opening appliances for maintenance, service, repair or disposal must comply with the required practices pursuant to 40 CFR 82.156
- (b) Equipment used during the maintenance, service, repair or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

## SECTION D.1 FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-8-4(10)]:

- (a) One (1) spray paint booth, located in building 453, constructed in 1989, equipped with ten (10) high volume low pressure (HVLP) spray guns, two HVLP (2) stencil mini spray guns and one (1) electrostatic HVLP spray gun, capacity: 1 aircraft panel per hour.
- (b) One (1) interior parts paint area, located in one of the following nose docks (Nose Docks 1 through 6), using the HVLP spray applicators, rollers and brushes existing at building 453, used for coating the interior parts of planes that cannot be removed for painting at building 453, with coating operations beginning in the summer of 1996, capacity: 12 planes per year.
- (c) One (1) airplane exterior paint area, located in one of the following nose docks (Nose Docks 1 through 6), using the HVLP spray applicators, rollers and brushes existing at building 453, with coating operations beginning in August of 1995, capacity: 52 airplane exteriors per year.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-8-4(1)]

#### D.1.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-9][326 IAC 8-1-6][326 IAC 2-8-4][326 IAC 2-2]

- (a) Pursuant to T 103-7426-00008, issued on December 1, 1999, the VOC usage at the one (1) spray paint booth, located in building 453, shall be limited to less than twenty-five (25) tons per twelve (12) consecutive months, based on a monthly rolling total. This will result in VOC emissions of less than twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 8-2-9 (Miscellaneous Metal Coating), are not applicable.
- (b) Pursuant to T 103-7426-00008, issued on December 1, 1999, the VOC usage at the one (1) interior parts paint area shall be limited to less than fifteen (15) pounds per day. This will result in VOC emissions of less than fifteen (15) pounds per day and twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 8-2-9 (Miscellaneous Metal Coating), are not applicable.
- (c) Any change or modification at the one (1) airplane exterior paint area that results in coating metal parts other than the exterior of airplanes may result in the applicability of 326 IAC 8-2-9 (Miscellaneous Metal Coating), and shall require prior IDEM, OAQ approval.
- (d) The interior parts paint operations and the airplane exterior paint operations shall not operate at the same nose dock at any time. This condition, in conjunction with Condition D.1.1 (b), (e) and (g), and Condition D.1.4, shall make the requirements of 326 IAC 8-1-6, 326 IAC 2-2 and 40 CFR 52.21 not applicable.
- (e) Any change or modification at the one (1) airplane exterior paint area that results in VOC emissions of twenty-five (25) tons per year or more may result in the applicability of 326 IAC 8-1-6 (New Facilities; General reduction requirements), and shall require prior IDEM, OAQ approval.
- (f) The limitations listed in (a), (b) and (e) of this condition shall limit the potential to emit VOC emissions from the total of the one (1) spray paint booth located in building 453, the one (1) interior parts paint area and the one (1) airplane exterior paint area to less than 52.7 tons

per year and the potential to emit VOC from the entire source to less than 96.0 tons per year. Therefore, this source qualifies for a FESOP under 326 IAC 2-8 and the requirements of 326 IAC 2-7, Part 70, are not applicable.

- (g) Any change or modification at the one (1) interior parts paint area or the one (1) airplane exterior paint area that results in VOC emissions of forty (40) tons per year or more will make the paint area a major modification to an existing major source, pursuant to 326 IAC 2-2, and shall require prior IDEM, OAQ approval.
- (h) Pursuant to T 103-7426-00008, issued on December 1, 1999, the requirement from the registration, issued on October 26, 1989, for the aircraft maintenance facility, including a spray booth capable of painting one unit (aircraft panel) per hour, a stripping area capable of paint stripping two units per hour, and a fiberglass shop capable of cutting and sanding one unit per hour in building 453, that any change or modification which may increase the potential emissions to twenty-five (25) tons of particulate matter or volatile organic compounds (VOC) per year or more from the equipment covered in this letter must be approved by the Office of Air Quality before such change may occur, is not incorporated into this permit because, although there have been no changes to the painting area in Building 453, calculated potential emissions are greater than twenty-five (25) tons per year of VOC. The source has limited emissions to less than twenty-five (25) tons per year. Therefore, there is a limitation on emissions of less than twenty-five (25) tons per year of VOC in (a) of this condition and the requirements from the registration issued on October 26, 1989 is hereby rescinded.

#### D.1.2 Hazardous Air Pollutants (HAPs) [326 IAC 2-8-4]

- (a) Pursuant to T 103-7426-00008, issued on December 1, 1999, the total HAP usage at the one (1) spray paint booth, located in building 453, one (1) interior parts paint area and the one (1) airplane exterior paint area shall be limited to no more than 17.6 tons per twelve (12) consecutive months, based on a monthly rolling total. This will result in total HAP emissions of no more than 17.6 tons per year from these facilities and total HAP emissions of less than twenty-five (25) tons per year from the entire source.
- (b) Pursuant to T 103-7426-00008, issued on December 1, 1999, the combined total usage of each individual hazardous air pollutant at the one (1) spray paint room in building 453, one (1) interior parts paint area and one (1) airplane exterior paint area shall be limited to less than 9 tons per twelve (12) consecutive months, based on a monthly rolling total. The total usage of Methyl isobutyl ketone (MIBK) at the one (1) spray paint room in building 453, one (1) interior parts paint area and one (1) airplane exterior paint area shall be limited to less than 8.92 tons per twelve (12) consecutive months, based on a monthly rolling total, and the total usage of Hexane at the one (1) spray paint room in building 453, one (1) paint area and one (1) airplane exterior paint area shall be limited to less than 7.75 tons per twelve (12) consecutive months, based on a monthly rolling total. This will result in emissions of each individual hazardous air pollutant of less than nine (9) tons per year and total individual HAP emissions of less than ten (10) tons per year from the entire source.

As a result of these limitations, the requirements of 40 CFR Part 63, Subpart GG, and 326 IAC 2-7, Part 70, are not applicable.

#### D.1.3 Particulate Matter (PM) [326 IAC 6-3-2(c)]

Pursuant to 326 IAC 6-3-2, the PM from the one (1) spray paint booth located in building 453, the one (1) interior parts paint area and the one (1) airplane exterior paint area shall not exceed 0.551 pounds per hour for process weight rates of less than 100 pounds per hour. For process weights rates of 100 pounds per hour or more, the allowable PM emission rate shall be based on the

following formulas:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

or

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

**D.1.4 Particulate Matter (PM and PM<sub>10</sub>) [326 IAC 2-8-4][326 IAC 2-2]**

- (a) The PM<sub>10</sub> overspray emissions from the total of the one (1) spray paint booth located in building 453, the one (1) interior parts paint area and the one (1) airplane exterior paint area shall not exceed 7.65 pounds per hour, equivalent to 33.5 tons per year, which represents the total unrestricted potential to emit for the one (1) spray paint booth located in building 453, the one (1) interior parts paint area and the one (1) airplane exterior paint area. Therefore, the requirements of 326 IAC 2-7 do not apply and no record keeping or reporting is required.
- (b) Pursuant to T 103-7426-00008, issued on December 1, 1999, any change or modification at the one (1) interior parts paint area or the one (1) airplane exterior paint area that results in PM emissions of twenty-five (25) tons per year or more, or PM<sub>10</sub> emissions of fifteen (15) tons per year or more will make the paint area a major modification to an existing major source, pursuant to 326 IAC 2-2, and shall require prior IDEM, OAQ approval.

**D.1.5 Preventive Maintenance Plan [326 IAC 2-8-4(9)]**

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and any control devices.

**Compliance Determination Requirements**

**D.1.6 Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs)**

Compliance with the VOC and HAP usage limitations contained in Conditions D.1.1 and D.1.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer.

**D.1.7 VOC and HAPs Emissions**

- (a) Compliance with Conditions D.1.1(a) and D.1.2 shall be demonstrated within 30 days of the end of each month based on the total volatile organic compound and hazardous air pollutant usage for the most recent twelve (12) month period.
- (b) Compliance with Condition D.1.1(b) shall be demonstrated within 30 days of the end of each month based on the total volatile organic compound usage for each day in that month.

### **Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]**

#### **D.1.8 Monitoring**

- (a) Weekly observations shall be made of the overspray from the surface coating stacks or emission points while the areas are in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
- (b) Monthly inspections shall be performed of the coating emissions from the stacks or emission points and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
- (c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

### **Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]**

#### **D.1.9 Record Keeping Requirements**

- (a) To document compliance with Conditions D.1.1(a) and D.1.2, the Permittee shall maintain records at building 453 for the one (1) spray paint booth located in building 453, one (1) interior parts paint area and one (1) airplane exterior paint area in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC and HAP usage limits established in Conditions D.1.1(a) and D.1.2.
  - (1) The amount and VOC and HAP content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
  - (2) A log of the dates of use;
  - (3) The cleanup solvent usage for each month;
  - (4) The total VOC and HAP usage for each month; and
  - (5) The weight of VOCs and HAPs emitted for each compliance period.
- (b) To document compliance with Condition D.1.1(b), the Permittee shall maintain records at building 453 for the one (1) interior parts paint area in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken daily and shall be complete and sufficient to establish compliance with the VOC usage limits established in Condition D.1.1(b).
  - (1) The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differ-



entiate between those added to coatings and those used as cleanup solvents;

- (2) A log of the dates of use;
  - (3) The cleanup solvent usage for each day;
  - (4) The total VOC usage for each day; and
  - (5) The weight of VOCs emitted for each compliance period.
- (c) To document compliance with Condition D.1.8, the Permittee shall maintain a log of weekly overspray observations and monthly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.1.10 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.1 and D.1.2 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

## SECTION D.2 FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-8-4(10)]:

- (d) One (1) grit blast room, located in building 426, constructed in 1989, equipped with a baghouse, capacity: 767 pounds of grit per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-8-4(1)]

#### D.2.1 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the one (1) grit blast room shall not exceed 2.16 pounds per hour when operating at a process weight rate of 767 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and  
P = process weight rate in tons per hour

#### D.2.2 Particulate Matter (PM<sub>10</sub>) [326 IAC 2-8-4]

The PM<sub>10</sub> emissions from the one (1) grit blast room, located in building 426, shall not exceed 2.16 pounds per hour, which is equivalent to the allowable PM emission rate for the one (1) grit blast room. This will limit the potential to emit PM<sub>10</sub> from this facility to 9.46 tons per year. Therefore, the requirements of 326 IAC 2-7 do not apply and no record keeping or reporting is required.

#### D.2.3 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

Pursuant to T 103-7426-00008, issued on December 1, 1999, a Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

### Compliance Determination Requirements

#### D.2.4 Particulate Matter (PM)

In order to demonstrate compliance with Condition D.2.1, the baghouse for PM control shall be in operation at all times when the one (1) grit blast room is in operation.

### Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

There are no specific Compliance Monitoring Requirements applicable to this emission unit.

## SECTION D.3 FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-8-4(10)]:

- (e) One (1) bulk POL system, constructed in 1990, consisting of the following:
- (1) Six (6) horizontal underground JP-8 storage tanks, known as 736-1, 736-2, 736-3, 736-4, 736-5 and 736-6, installed in 1954, capacity: 50,000 gallons, each.
  - (2) Four (4) vertical above ground JP-8 storage tanks, known as 400, 401, 402 and 403 installed in 1957, capacity: 630,000 gallons, each.
  - (3) One (1) vertical above ground JP-8 storage tank, known as 406, installed in 1961, capacity: 1,050,000 gallons.
  - (4) Two (2) horizontal above ground storage tanks, known as 383 and 384, installed in 1991, capacity: 25,000 gallons of propylene glycol, each.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-8-4(1)]

#### D.3.1 Volatile Organic Compounds (VOCs) [326 IAC 8-1-6]

Any change or modification to the bulk POL system that results in an increase in VOC to twenty-five (25) tons per year or more, may result in the applicability of 326 IAC 8-1-6, and shall require prior IDEM, OAQ approval.

#### D.3.2 Standards of Performance for Volatile Organic Liquid Storage Vessels [326 IAC 12][40 CFR 60.116b]

The two (2) propylene glycol storage tanks, identified as 383 and 384, shall comply with the New Source Performance Standards (NSPS), 326 IAC 12 (40 CFR Part 60.116b, Subpart Kb). 40 CFR Part 60.116b paragraphs (a) and (b) require the Permittee to maintain accessible records showing the dimension of each storage vessel and an analysis showing the capacity of the storage vessel. Records shall be kept for the life of the storage tanks.

#### D.3.3 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR 60, Subpart A]

The provisions of 40 CFR 60 Subpart A - General Provisions, which are incorporated as 326 IAC 12-1, apply to the two (2) propylene glycol storage tanks, identified as 383 and 384, described in this section except when otherwise specified in 40 CFR 60 Subpart Kb.

### Compliance Determination Requirements

There are no specific Compliance Determination Requirements applicable to these emission units.

### Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

There are no specific Compliance Monitoring Requirements applicable to these emission units.

**Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]**

- D.3.4 Standards of Performance for Volatile Organic Liquid Storage Vessels [326 IAC 12][40 CFR 60.116b]  
The Permittee shall maintain accessible records showing the dimension of the two (2) propylene glycol storage tanks, identified as 383 and 384, and an analysis showing the capacity of the storage vessel. Records shall be kept for the life of the storage tanks.

#### SECTION D.4

#### FACILITY OPERATION CONDITIONS

##### **Facility Description [326 IAC 2-8-4(10)]: Insignificant Activities**

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour, propane or liquified petroleum gas or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) British thermal units per hour, and fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) British thermal units per hour and firing fuel containing less than five-tenths (0.5) percent sulfur by weight, including, but not limited to, the following (all boilers are specified):
  - (1) Twenty-nine (29) boilers and seven (7) water heaters, constructed in 2000, consisting of the following: [326 IAC 6-2-4]
    - (A) One (1) natural gas fired boiler, identified as Boiler 100, located in Building 100, maximum capacity: 0.650 million British thermal units per hour.
    - (B) One (1) natural gas fired boiler, identified as Boiler 209A, located in Building 209, maximum capacity: 3.0 million British thermal units per hour.
    - (C) One (1) natural gas fired boiler and one (1) water heater, located in Building 325, maximum capacity: 1.05 million British thermal units per hour, total.
    - (D) One (1) natural gas fired boiler and one (1) water heater, located in Building 327, maximum capacity: 2.0 million British thermal units per hour, total.
    - (E) One (1) natural gas fired boiler and one (1) water heater, located in Building 328, maximum capacity: 2.0 million British thermal units per hour, total.
    - (F) One (1) natural gas fired boiler and one (1) water heater, located in Building 329, maximum capacity: 2.0 million British thermal units per hour, total.
    - (G) One (1) natural gas fired boiler, identified as Boiler 330, located in Building 330, maximum capacity: 0.850 million British thermal units per hour.
    - (H) One (1) natural gas fired boiler and one (1) water heater, located in Building 331, maximum capacity: 2.0 million British thermal units per hour.
    - (I) One (1) natural gas fired boiler and one (1) water heater, located in Building 332, maximum capacity: 2.0 million British thermal units per hour, total.
    - (J) One (1) natural gas fired boiler and one (1) water heater, located in Building 333, maximum capacity: 2.0 million British thermal units per hour, total.
    - (K) Four (4) natural gas fired boilers, located in Building 426, maximum capacity: 0.35 million British thermal units per hour.
    - (L) One (1) natural gas fired boiler, identified as Boiler 427, located in Building 427, maximum capacity: 0.9 million British thermal units per hour.
    - (M) One (1) natural gas fired boiler, identified as Boiler 430, located in Building 430, maximum capacity: 0.450 million British thermal units per hour.

**Facility Description [326 IAC 2-8-4(10)]:** Insignificant Activities - Continued

- (N) One (1) natural gas fired boiler, identified as Boiler 435, located in Building 435, maximum capacity: 0.85 million British thermal units per hour.
- (O) One (1) natural gas fired boiler, identified as Boiler 431, located in Building 431, maximum capacity: 0.450 million British thermal units per hour.
- (P) One (1) natural gas fired boiler, identified as Boiler 448, located in Building 448, maximum capacity: 0.650 million British thermal units per hour.
- (Q) One (1) natural gas fired boiler, identified as Boiler 453, located in Building 453, maximum capacity: 0.105 million British thermal units per hour.
- (R) One (1) natural gas fired boiler, identified as Boiler 596A, located in Building 596, maximum capacity: 1.20 million British thermal units per hour.
- (S) One (1) natural gas fired boiler, identified as Boiler 596B, located in Building 596, maximum capacity: 0.040 million British thermal units per hour.
- (T) One (1) natural gas fired boiler, identified as Boiler 663, located in Building 663, maximum capacity: 1.8 million British thermal units per hour.
- (U) One (1) natural gas fired boiler, identified as Boiler 667, located in Building 667, maximum capacity: 0.6 million British thermal units per hour.
- (V) One (1) natural gas fired boiler, identified as Boiler 668a, located in Building 668, maximum capacity: 0.450 million British thermal units per hour.
- (W) One (1) natural gas fired boiler, identified as Boiler 670, located in Building 670, maximum capacity: 0.65 million British thermal units per hour.
- (X) Three (3) natural gas fired boilers, located in Building 671, maximum capacity: 0.66 million British thermal units per hour, total.
- (2) One (1) natural gas fired boiler, identified as 668b, constructed in February 2001, maximum capacity: 0.45 million British thermal units per hour. [326 IAC 6-2-4]
- (3) One (1) natural gas and propane fired boiler, identified as 233, constructed in 1999, maximum capacity: 0.45 million British thermal units per hour. [326 IAC 6-2-4]
- (4) One (1) natural gas and No. 2 fuel oil fired boiler, identified as 440, constructed in 1992, maximum capacity: 0.151 million British thermal units per hour. [326 IAC 6-2-4]
- (5) One (1) No. 2 fuel oil fired boiler, identified as 591b, constructed in 1992, maximum capacity: 0.25 million British thermal units per hour. [326 IAC 6-2-4]
- (6) One (1) natural gas fired boiler, identified as 563a, constructed in 1991, maximum capacity: 0.40 million British thermal units per hour. [326 IAC 6-2-4]
- (7) One (1) natural gas fired boiler, identified as 563b, constructed in 1979, maximum capacity: 0.08 million British thermal units per hour. [326 IAC 6-2-3]

**Facility Description [326 IAC 2-8-4(10)]:** Insignificant Activities - Continued

- (8) One (1) natural gas fired boiler, identified as 593a, constructed in 1992, maximum capacity: 0.40 million British thermal units per hour. [326 IAC 6-2-4]
- (9) One (1) natural gas fired boiler, identified as 593b, constructed in 1989, maximum capacity: 0.40 million British thermal units per hour. [326 IAC 6-2-4]
- (10) One (1) natural gas fired boiler, identified as 595, constructed in 1988, maximum capacity: 0.40 million British thermal units per hour. [326 IAC 6-2-4]
- (11) One (1) natural gas fired boiler, identified as 597, constructed in 1985, maximum capacity: 1.611 million British thermal units per hour. [326 IAC 6-2-4]
- (12) One (1) natural gas or propane fired boiler, identified as 600b, constructed in 1992, maximum capacity: 1.50 million British thermal units per hour. [326 IAC 6-2-4]
- (13) One (1) No. 2 fuel oil fired boiler/ hot water heater, identified as 600c, constructed in 1992, maximum capacity: 0.40 million British thermal units per hour. [326 IAC 6-2-4]
- (14) One (1) natural gas or propane fired boiler, identified as 669, constructed in 1998, maximum capacity: 0.90 million British thermal units per hour. [326 IAC 6-2-4]
- (15) One (1) natural gas or propane fired boiler, identified as 683, constructed in 1993, maximum capacity: 0.40 million British thermal units per hour. [326 IAC 6-2-4]
- (16) One (1) natural gas or propane fired boiler, identified as 687, constructed in 1997, maximum capacity: 1.703 million British thermal units per hour. [326 IAC 6-2-4]
- (17) One (1) propane fired boiler, identified as 715, constructed in 1993, maximum capacity: 0.08 million British thermal units per hour. [326 IAC 6-2-4]
- (18) One (1) boiler, fired by natural gas, identified as B592, constructed in 1997, equipped with a low NO<sub>x</sub> burner, capacity: 5.02 million British thermal units per hour. [326 IAC 6-2-4]
- (19) One (1) boiler, identified as boiler 591a, constructed in 1987, fired by natural gas, capacity: 2.049 million British thermal units per hour. [326 IAC 6-2-4]
- (20) One (1) boiler, identified as boiler 600a, constructed in 1986, fired by natural gas as a primary fuel and propane as a backup fuel, capacity: 2.025 million British thermal units per hour. [326 IAC 6-2-4]
- (21) One-hundred and ten (110) natural gas fired infrared heaters, maximum capacity: 20.70 million British thermal units per hour, total.
- (b) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6. Several cold cleaner degreasing units using only non-halogenated solvents. [326 IAC 8-3-2][326 IAC 8-3-5]
- (c) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment. [326 IAC 6-3]

**Facility Description [326 IAC 2-8-4(10)]:** Insignificant Activities - Continued

- (d) Grinding and machining operations controller with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations. [326 IAC 6-3]
- (e) Activities or categories of activities with HAP emissions greater than 1 pound per day but less than 12.5 pounds per day or 2.5 tons per year of any combination of HAPs:
  - (1) Installation of compass and global positioning equipment and replacing radar equipment on Air Force planes in Nose Dock 2 (including painting operations). [326 IAC 6-3]
  - (2) Fuel cell repair
  - (3) JP-8 fuel handling
  - (4) Low point draw box remediation
- (f) The following activities or categories with emissions below insignificant thresholds:
  - (1) Four (4) media blasters, equipped with 99% efficient bag filters, operating an average of three (3) hours per day. [326 IAC 6-3]
  - (2) One (1) firing range bullet trap equipped with dust collector. [326 IAC 6-3]
  - (3) Two (2) propylene glycol above ground storage tanks, identified as 381 and 382, constructed in 1991, capacity: 25,000 gallons, each.[326 IAC 12][40 CFR 60.116b]
  - (4) One (1) fuel oil tank, identified as 235, installed in 1976, capacity: 420,000 gallons.
  - (5) One (1) diesel tank, identified as 380, installed in 1991, capacity: 10,000 gallons.
  - (6) One (1) diesel tank, identified as 447, installed in 1995, capacity: 10,000 gallons.
  - (7) One (1) diesel aboveground storage tank, identified as 593B, installed in 2001, capacity: 2,000 gallons.
  - (8) One (1) JP-8 aboveground storage tank, identified as 593A, installed in 2001, capacity: 2,000 gallons.
  - (9) One (1) diesel underground storage tank, identified as 419C, installed in 1987, capacity: 10,000 gallons.
  - (10) Two (2) fuel oil above ground storage tanks, identified as 683 and 440, capacity: less than 1,000 gallons.
  - (11) One (1) propane storage tank, capacity: 10,000 gallons.
  - (12) One (1) propane storage tank, capacity: 4,000 gallons.
  - (13) Several propane tanks equal or less than 1,000 gallons.



**Facility Description [326 IAC 2-8-4(10)]:** Insignificant Activities - Continued

- (14) Twenty-two (22) diesel above ground storage tanks, capacity: less than 1,000 gallons.
- (15) One (1) JP-8 above ground storage tank, identified as 404, constructed in 1995, capacity: 500 gallons.
- (16) One (1) used oil storage tank, identified as 420, constructed in 1993, capacity: 300 gallons.
- (g) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 British thermal units per hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 British thermal units per hour.
- (h) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons, consisting of two (2) gasoline underground storage tanks, identified as 419A and 419B, capacity: 10,000 gallons, each.
- (i) Petroleum fuel other than gasoline dispensing facility, having a storage tank capacity less than or equal to ten thousand five hundred (10,500) gallons, and dispensing three thousand five hundred (3,500) gallons per day or less.
- (j) VOC and HAP storage tanks with capacities less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.
- (k) Groundwater oil recovery wells.
- (l) Any operation using aqueous solutions containing less than one percent (1%) by weight of VOCs excluding HAPs.
- (m) Stockpiled soils from soil remediation activities that are covered and waiting transport for disposal.
- (n) Paved and unpaved roads and parking lots with public access.
- (o) Asbestos abatement projects regulated by 326 IAC 14-10.
- (p) Purging of gas lines and vessels that is related to routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process.
- (q) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment.
- (r) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (s) On-site fire and emergency response training approved by the department.

**Facility Description [326 IAC 2-8-4(10)]:** Insignificant Activities - Continued

(t) Emergency generators as follows:

Gasoline generators not exceeding 110 horsepower.

Diesel generators not exceeding 1,600 horsepower.

Natural gas turbines or reciprocating engines not exceeding 16,000 horsepower.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

D.4.1 Standards of Performance for Volatile Organic Liquid Storage Vessels [326 IAC 12][40 CFR 60.116b]

The two (2) propylene glycol storage tanks, identified as 381 and 382, shall comply with the New Source Performance Standards (NSPS), 326 IAC 12 (40 CFR Part 60.116b, Subpart Kb). 40 CFR Part 60.116b paragraphs (a) and (b) require the Permittee to maintain accessible records showing the dimension of each storage vessel and an analysis showing the capacity of the storage vessel. Records shall be kept for the life of the storage tanks.

D.4.2 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR 60, Subpart A]

The provisions of 40 CFR 60 Subpart A - General Provisions, which are incorporated as 326 IAC 12-1, apply to the two (2) propylene glycol storage tanks, identified as 381 and 382, described in this section except when otherwise specified in 40 CFR 60 Subpart Kb.

D.4.3 Particulate Matter Limitation (PM) [326 IAC 6-2-3]

Pursuant to 326 IAC 6-2-3, the PM emissions from the one (1) boiler (563b) shall not exceed 0.13 pound per million British thermal units heat input.

This limitation is based on the following equation:

$$Pt = C \times a \times h / 76.5 \times Q^{0.75} \times N^{0.25}$$

where:

Pt = Pounds of particulate matter emitted per million British thermal units (lb/MMBtu) heat input

Q = Total source maximum operating capacity rating in million British thermal units per hour (MMBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

C = Maximum ground level concentration with respect to distance from the point source at the "critical" wind speed for level terrain. This shall equal 50 micrograms per cubic meter for a period not to exceed a sixty (60) minute time period.

N = Number of stacks in fuel burning operation.

a = Plume rise factor which is used to make allowance for less than theoretical plume rise. The value 0.67 shall be used for Q less than or equal to 1,000 MMBtu/hr heat input.

The value 0.8 shall be used for Q greater than 1,000 MMBtu/hr heat input.

h = Stack height in feet.

#### D.4.4 Particulate Matter Limitation (PM) [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4, the PM emissions from the insignificant boilers constructed after September 21, 1983 shall be limited as follows:

Year Constructed	Boilers Constructed	PM Emission Limitation for each boiler (lbs/MMBtu) (Pt)
1985	597	0.25
1986	600a	0.25
1987	591a	0.25
1988	595	0.25
1989	593b	0.25
1991	563a	0.25
1992	400, 591b, 593a, 600b and 600c	0.25
1993	683 and 715	0.25
1997	687	0.25
1997	B592	0.25
1998	669	0.25
1999	233	0.25
2000	Twenty-nine (29) boilers and seven (7) water heaters	0.24
2001	668b	0.40

These limitations are based on the following equation:

$$Pt = 1.09/Q^{0.26}$$

where:

Pt = Pounds of particulate matter emitted per million British thermal units (lb/MMBtu) heat input

Q = Total source maximum operating capacity rating in million British thermal units per hour (MMBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

#### D.4.5 Nonapplicable Requirements

Operation Condition 4 from CP 103-2636-00008, issued on December 18, 1992, which states, "That the amount of natural gas usage for the boilers (No. 3, 4 and 5) shall be limited to 1324.2 million

cubic feet per year, based on a twelve month average rolled on a monthly basis. During the first 12 months of operation, natural usage shall be limited such that total natural gas usage divided by the months of operation shall not exceed 110.35 million cubic feet per year, and Operation Condition 5 from CP 103-2636-00008, issued on December 18, 1992, which states, "That the amount of # 2 fuel oil usage for the boilers (#3, 4, and 5) shall be limited to 4,660,062 gallons per year, based on a twelve month average rolled on a monthly basis. During the first 12 months of operation, fuel oil usage shall be limited such that total fuel oil usage divided by the months of operation shall not exceed 388,338.5 gallons per month. For each gallon of fuel used, the natural gas usage shall be reduced by 142.8 cubic feet. Therefore, this condition and condition Nos. 4, 6, and 7 will make the Prevention of Significant Deterioration (PSD) rules, 326 IAC 2-2 and 40 CFR 52.21 not applicable," and all conditions in Section D.1 (D.1.1 through D.1.9) of T 103-7426-00008, issued on December 1, 1999, are not applicable because the five (5) boilers (BOI1, BOI2, BOI3, BOI4, and BOI5) have been removed from this source. Therefore, Operation Conditions 4 and 5 from CP 103-2636-00008, issued on December 18, 1992, and Conditions D.1.1 through D.1.9 of T 103-7426-00008, issued on December 1, 1999 are hereby rescinded.

D.4.6 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations) for cold cleaning operations constructed after January 1, 1980, the owner or operator shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

D.4.7 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser without remote solvent reservoirs constructed after July 1, 1990, shall ensure that the following requirements are met:
  - (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
    - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF));
    - (B) The solvent is agitated; or
    - (C) The solvent is heated.
  - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-

eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

- (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
  - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
  - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9EC) (one hundred twenty degrees Fahrenheit (120EF)):
    - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
    - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
    - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility construction of which commenced after July 1, 1990, shall ensure that the following operating requirements are met:
- (1) Close the cover whenever articles are not being handled in the degreaser.
  - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
  - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

#### D.4.8 Particulate Matter Limitation (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Process Operations), the allowable PM emission rate from the grinding and machining operations, four (4) media blasters, one (1) firing range bullet trap, and the brazing, cutting, soldering, and welding shall not exceed 0.551 pounds per hour for process weight rates of less than 100 pounds per hour. For process weights rates of 100 pounds per hour or more, the allowable PM emission rate shall be based on the following equations:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

or

Interpolation and extrapolation of the data for the process weight rate in excess of 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where} \quad E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

#### **Compliance Determination Requirement**

##### **D.4.9 Particulate Matter (PM)**

In order to comply with D.4.8, the bag filters shall be in operation at all times when the four (4) media blasters are in operation and the dust collector shall be in operation at all times when the one (1) firing range bullet trap was in operation.

#### **Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]**

There are no specific Compliance Monitoring Requirements applicable to these emission units.

#### **Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]**

##### **D.4.10 Standards of Performance for Volatile Organic Liquid Storage Vessels [326 IAC 12][40 CFR 60.116b]**

The Permittee shall maintain accessible records showing the dimension of the two (2) propylene glycol storage tanks, identified as 381 and 382, and an analysis showing the capacity of the storage vessel. Records shall be kept for the life of the storage tanks.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)  
CERTIFICATION**

Source Name: Grissom Air Reserve Base  
Source Address: Grissom Air Reserve Base, Grissom, Indiana 46971-5000  
Mailing Address: 434 SPTG/CEV, Room 124, 641 Readiness Circle, Grissom, Indiana 46971-5000  
FESOP No.: F103-13875-00008

**This certification shall be included when submitting monitoring, testing reports/results  
or other documents as required by this permit.**

Please check what document is being certified:

- 9 Annual Compliance Certification Letter
- 9 Test Result (specify) \_\_\_\_\_
- 9 Report (specify) \_\_\_\_\_
- 9 Notification (specify) \_\_\_\_\_
- 9 Affidavit (specify) \_\_\_\_\_
- 9 Other (specify) \_\_\_\_\_

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH  
P.O. Box 6015  
100 North Senate Avenue  
Indianapolis, Indiana 46206-6015  
Phone: 317-233-5674  
Fax: 317-233-5967**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)  
EMERGENCY OCCURRENCE REPORT**

Source Name: Grissom Air Reserve Base  
Source Address: Grissom Air Reserve Base, Grissom, Indiana 46971-5000  
Mailing Address: 434 SPTG/CEV, Room 124, 641 Readiness Circle, Grissom, Indiana 46971-5000  
FESOP No.: F103-13875-00008

**This form consists of 2 pages**

**Page 1 of 2**

- |   |
|---|
| <p>9 This is an emergency as defined in 326 IAC 2-7-1(12)<br/>    CThe Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and<br/>    CThe Permittee must submit notice in writing or by facsimile within two (2) days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16</p> |
|---|

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:



If any of the following are not applicable, mark N/A

**Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency?    Y    N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO <sub>2</sub> , VOC, NO <sub>x</sub> , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

A certification is not required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH  
Part 70 Quarterly Report**

Source Name: Grissom Air Reserve Base  
Source Address: Grissom Air Reserve Base, Grissom, Indiana 46971-5000  
Mailing Address: 434 SPTG/CEV, Room 124, 641 Readiness Circle, Grissom, Indiana 46971-5000  
FESOP No.: F103-13875-00008  
Facility: One (1) interior parts paint area  
Parameter: VOC usage  
Limit: Less than 15 pounds per day

Months: \_\_\_\_\_ Year: \_\_\_\_\_

Day	VOC usage (pounds) Month 1	VOC usage (pounds) Month 2	VOC usage (pounds) Month 3	Day	VOC usage (pounds) Month 1	VOC usage (pounds) Month 2	VOC usage (pounds) Month 3
1				17			
2				18			
3				19			
4				20			
5				21			
6				22			
7				23			
8				24			
9				25			
10				26			
11				27			
12				28			
13				29			
14				30			
15				31			
16				No. of deviations			

- 9 No deviation occurred in this month.  
9 Deviation/s occurred in this month.

Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title/Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH**

**Part 70 Quarterly Report**

Source Name: Grissom Air Reserve Base  
Source Address: Grissom Air Reserve Base, Grissom, Indiana 46971-5000  
Mailing Address: 434 SPTG/CEV, Room 124, 641 Readiness Circle, Grissom, Indiana 46971-5000  
FESOP No.: F103-13875-00008  
Facility: One (1) spray paint booth, located in building 453  
Parameter: VOC usage  
Limit: Less than 25 tons per consecutive twelve (12) month period, based on a monthly rolling total

YEAR: \_\_\_\_\_

Month	VOC Usage (tons)	VOC Usage (tons)	VOC Usage (tons)
	This Month	Previous 11 Months	12 Month Total

9 No deviation occurred in this month.

9 Deviation/s occurred in this month.

Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title/Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH**

**Part 70 Quarterly Report**

Source Name: Grissom Air Reserve Base  
Source Address: Grissom Air Reserve Base, Grissom, Indiana 46971-5000  
Mailing Address: 434 SPTG/CEV, Room 124, 641 Readiness Circle, Grissom, Indiana 46971-5000  
FESOP No.: F103-13875-00008  
Facility: One (1) spray paint booth, located in building 453, one (1) interior parts paint area and one (1) airplane exterior paint area  
Parameter: Total HAP usage  
Limit: Less than 17.6 tons per consecutive twelve (12) month period, based on a monthly rolling total

YEAR: \_\_\_\_\_

Month	Total HAP Usage (tons)	Total HAP Usage (tons)	Total HAP Usage (tons)
	This Month	Previous 11 Months	12 Month Total

- 9 No deviation occurred in this month.  
9 Deviation/s occurred in this month.

Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title/Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH**

**Part 70 Quarterly Report**

Source Name: Grissom Air Reserve Base  
Source Address: Grissom Air Reserve Base, Grissom, Indiana 46971-5000  
Mailing Address: 434 SPTG/CEV, Room 124, 641 Readiness Circle, Grissom, Indiana 46971-5000  
FESOP No.: F103-13875-00008  
Facility: One (1) spray paint booth, located in building 453, one (1) interior parts paint area and one (1) airplane exterior paint area  
Parameter: Individual HAP usage  
Limit: Less than 9 tons per consecutive twelve (12) month period, based on a monthly rolling total, less than 8.92 tons of Methyl isobutyl ketone (MIBK) per consecutive twelve (12) month period, based on a monthly rolling total, and less than 7.75 tons of Hexane per consecutive twelve (12) month period, based on a monthly rolling total

YEAR: \_\_\_\_\_ HAP: \_\_\_\_\_

Month	Maximum Individual HAP Usage (tons)*	Maximum Individual HAP Usage (tons)*	Maximum Individual HAP Usage (tons)*
	This Month	Previous 11 Months	12 Month Total

\*The maximum individual HAP usage is the HAP of which the greatest weight was used in the past twelve (12) month period. If the twelve (12) month total exceeds 7.76 tons, a separate form must be submitted for Hexane usage. If the twelve (12) month total also exceeds 8.92 tons, a separate form must also be submitted for MIBK usage.

- 9 No deviation occurred in this month.  
9 Deviation/s occurred in this month.  
Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title/Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)  
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Grissom Air Reserve Base  
Source Address: Grissom Air Reserve Base, Grissom, Indiana 46971-5000  
Mailing Address: 434 SPTG/CEV, Room 124, 641 Readiness Circle, Grissom, Indiana 46971-5000  
FESOP No.: F103-13875-00008

**Months:** \_\_\_\_\_ **to** \_\_\_\_\_ **Year:** \_\_\_\_\_

Page 1 of 2

This report is an affirmation that the source has met all the requirements stated in this permit. This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

9 NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

9 THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

**Permit Requirement** (specify permit condition #)

**Date of Deviation:**

**Duration of Deviation:**

**Number of Deviations:**

**Probable Cause of Deviation:**

**Response Steps Taken:**

**Permit Requirement** (specify permit condition #)

**Date of Deviation:**

**Duration of Deviation:**

**Number of Deviations:**

**Probable Cause of Deviation:**

**Response Steps Taken:**

<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	

<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	

<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

Form Completed By: \_\_\_\_\_

Title/Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

## Indiana Department of Environmental Management Office of Air Quality

### Addendum to the Technical Support Document for Federally Enforceable State Operating Permit (FESOP)

**Source Name:** Grissom Air Reserve Base  
**Source Location:** Grissom Air Reserve Base, Grissom, Indiana 46971-5000  
**County:** Miami  
**SIC Code:** 9711  
**Operation Permit No.:** F 103-13875-00008  
**Permit Reviewer:** CarrieAnn Ortolani

On June 9, 2001, the Office of Air Quality (OAQ) had a notice published in the Peru Tribune, Peru, Indiana, stating that Grissom Air Reserve Base had applied for a Federally Enforceable State Operating Permit (FESOP) to operate a military base. The notice also stated that OAQ proposed to issue a FESOP for this operation and provided information on how the public could review the proposed FESOP and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this FESOP should be issued as proposed.

On July 12, 2001, Jeffrey A. Woodring, P.E, of Grissom Air Reserve Base, submitted comments on the proposed FESOP. The comments are as follows (The permit language, if changed, has deleted language as ~~strikeouts~~ and new language **bolded**.):

#### Comment 1:

From May 1, 2001 to June 30, 2001, the fuel oil tanks were removed for boilers in buildings 591, 592, 595, 597, 600 and 663. Therefore, please remove these tanks from the permit. Removal of these tanks means that these boilers are now fueled only by natural gas. This will change the status of boilers 591, 592 and 600 from significant sources to insignificant sources. Please change the permit accordingly.

#### Response 1:

As a result of this change, the three (3) boilers in Section A.2 of the FESOP are now insignificant activities. The three (3) boilers have been moved from Section A.2 to A.3, Section D.4 of the FESOP has been removed, and the rules applicable to the three (3) boilers have been moved to Section D.5, which includes all insignificant activities. A Natural Gas Fired Boiler Certification is not required for insignificant boilers. Therefore, Natural Gas Fired Boiler Certification Form has been removed from the permit. In addition, the six (6) fuel oil tanks that have been removed from the source have also been removed from this FESOP, along with conditions applicable to those tanks. Therefore, the permit is changed as follows:

#### A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

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This stationary source consists of the following emission units and pollution control devices:

- (a) One (1) spray paint booth, located in building 453, constructed in 1989, equipped with eight (8) high volume low pressure (HVLP) spray guns and one (1) electrostatic HVLP spray gun, capacity: 1 aircraft panel per hour.
- (b) One (1) interior parts paint area, located in one of the following nose docks (Nose Docks 1 through 6), using the HVLP spray applicators, rollers and brushes existing at building 453, used for coating the interior parts of planes that cannot be removed for painting at building



453, with coating operations beginning in the summer of 1996, capacity: 12 planes per year.

- (c) One (1) airplane exterior paint area, located in one of the following nose docks (Nose Docks 1 through 6), using the HVLP spray applicators, rollers and brushes existing at building 453, with coating operations beginning in August of 1995, capacity: 52 airplane exteriors per year.
- (d) One (1) grit blast room, located in building 426, constructed in 1989, equipped with a bag-house, capacity: 767 pounds of grit per hour.
- (e) One (1) bulk POL system, constructed in 1990, consisting of the following:
  - (1) Six (6) horizontal underground JP-8 storage tanks, known as 736-1, 736-2, 736-3, 736-4, 736-5 and 736-6, installed in 1954, capacity: 50,000 gallons, each.
  - (2) Four (4) vertical above ground JP-8 storage tanks, known as 400, 401, 402 and 403 installed in 1957, capacity: 630,000 gallons, each.
  - (3) One (1) vertical above ground JP-8 storage tank, known as 406, installed in 1961, capacity: 1,050,000 gallons.
  - (4) Two (2) horizontal above ground storage tanks, known as 383 and 384, installed in 1991, capacity: 25,000 gallons of propylene glycol, each.
- ~~(f) One (1) boiler, fired by natural gas and No. 2 fuel oil, identified as B592, constructed in 1997, equipped with a low NO<sub>x</sub> burner, capacity: 5.02 million British thermal units per hour when operating on natural gas and 6.29 million British thermal units per hour when operating on No. 2 fuel oil.~~
- ~~(g) One (1) boiler, identified as boiler 591a, constructed in 1987, fired by natural gas or No. 2 fuel oil, capacity: 2.049 million British thermal units per hour when operating on natural gas and 1.988 million British thermal units when operating on No. 2 fuel oil.~~
- ~~(h) One (1) boiler, identified as boiler 600a, constructed in 1986, fired by natural gas as a primary fuel and propane or No. 2 fuel oil as backup fuels, capacity: 2.025 million British thermal units per hour when operating on natural gas or propane, and 2.1 million British thermal units per hour when operating on No. 2 fuel oil.~~

A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour, propane or liquified petroleum gas or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) British thermal units per hour, and fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) British thermal units per hour and firing fuel containing less than five-tenths (0.5) percent sulfur by weight, including, but not limited to, the following (all boilers are specified):
  - (1) Twenty-nine (29) boilers and seven (7) water heaters, constructed in 2000, consisting of the following: [326 IAC 6-2-4]

- (A) One (1) natural gas fired boiler, identified as Boiler 100, located in Building 100, maximum capacity: 0.650 million British thermal units per hour.
- (B) One (1) natural gas fired boiler, identified as Boiler 209A, located in Building 209, maximum capacity: 3.0 million British thermal units per hour.
- (C) One (1) natural gas fired boiler and one (1) water heater, located in Building 325, maximum capacity: 1.05 million British thermal units per hour, total.
- (D) One (1) natural gas fired boiler and one (1) water heater, located in Building 327, maximum capacity: 2.0 million British thermal units per hour, total.
- (E) One (1) natural gas fired boiler and one (1) water heater, located in Building 328, maximum capacity: 2.0 million British thermal units per hour, total.
- (F) One (1) natural gas fired boiler and one (1) water heater, located in Building 329, maximum capacity: 2.0 million British thermal units per hour, total.
- (G) One (1) natural gas fired boiler, identified as Boiler 330, located in Building 330, maximum capacity: 0.850 million British thermal units per hour.
- (H) One (1) natural gas fired boiler and one (1) water heater, located in Building 331, maximum capacity: 2.0 million British thermal units per hour.
- (I) One (1) natural gas fired boiler and one (1) water heater, located in Building 332, maximum capacity: 2.0 million British thermal units per hour, total.
- (J) One (1) natural gas fired boiler and one (1) water heater, located in Building 333, maximum capacity: 2.0 million British thermal units per hour, total.
- (K) Four (4) natural gas fired boilers, located in Building 426, maximum capacity: 0.35 million British thermal units per hour.
- (L) One (1) natural gas fired boiler, identified as Boiler 427, located in Building 427, maximum capacity: 0.9 million British thermal units per hour.
- (M) One (1) natural gas fired boiler, identified as Boiler 430, located in Building 430, maximum capacity: 0.450 million British thermal units per hour.
- (N) One (1) natural gas fired boiler, identified as Boiler 435, located in Building 435, maximum capacity: 0.85 million British thermal units per hour.
- (O) One (1) natural gas fired boiler, identified as Boiler 431, located in Building 431, maximum capacity: 0.450 million British thermal units per hour.
- (P) One (1) natural gas fired boiler, identified as Boiler 448, located in Building 448, maximum capacity: 0.650 million British thermal units per hour.
- (Q) One (1) natural gas fired boiler, identified as Boiler 453, located in Building 453, maximum capacity: 0.105 million British thermal units per hour.

- (R) One (1) natural gas fired boiler, identified as Boiler 596A, located in Building 596, maximum capacity: 1.20 million British thermal units per hour.
  - (S) One (1) natural gas fired boiler, identified as Boiler 596B, located in Building 596, maximum capacity: 0.040 million British thermal units per hour.
  - (T) One (1) natural gas fired boiler, identified as Boiler 663, located in Building 663, maximum capacity: 1.8 million British thermal units per hour.
  - (U) One (1) natural gas fired boiler, identified as Boiler 667, located in Building 667, maximum capacity: 0.6 million British thermal units per hour.
  - (V) One (1) natural gas fired boiler, identified as Boiler 668a, located in Building 668, maximum capacity: 0.450 million British thermal units per hour.
  - (W) One (1) natural gas fired boiler, identified as Boiler 670, located in Building 670, maximum capacity: 0.65 million British thermal units per hour.
  - (X) Three (3) natural gas fired boilers, located in Building 671, maximum capacity: 0.66 million British thermal units per hour, total.
- (2) One (1) natural gas fired boiler, identified as 668b, constructed in February 2001, maximum capacity: 0.45 million British thermal units per hour. [326 IAC 6-2-4]
  - (3) One (1) natural gas and propane fired boiler, identified as 233, constructed in 1999, maximum capacity: 0.45 million British thermal units per hour. [326 IAC 6-2-4]
  - (4) One (1) natural gas and No. 2 fuel oil fired boiler, identified as 440, constructed in 1992, maximum capacity: 0.151 million British thermal units per hour. [326 IAC 6-2-4]
  - (5) One (1) No. 2 fuel oil fired boiler, identified as 591b, constructed in 1992, maximum capacity: 0.25 million British thermal units per hour. [326 IAC 6-2-4]
  - (6) One (1) natural gas fired boiler, identified as 563a, constructed in 1991, maximum capacity: 0.40 million British thermal units per hour. [326 IAC 6-2-4]
  - (7) One (1) natural gas fired boiler, identified as 563b, constructed in 1979, maximum capacity: 0.08 million British thermal units per hour. [326 IAC 6-2-3]
  - (8) One (1) natural gas fired boiler, identified as 593a, constructed in 1992, maximum capacity: 0.40 million British thermal units per hour. [326 IAC 6-2-4]
  - (9) One (1) natural gas fired boiler, identified as 593b, constructed in 1989, maximum capacity: 0.40 million British thermal units per hour. [326 IAC 6-2-4]
  - (10) One (1) natural gas and No. 2 fuel oil fired boiler, identified as 595, constructed in 1988, maximum capacity: 0.40 million British thermal units per hour. [326 IAC 6-2-4]
  - (11) One (1) natural gas or No. 2 fuel oil fired boiler, identified as 597, constructed in 1985, maximum capacity: 1.611 million British thermal units per hour. [326 IAC 6-2-4]
  - (12) One (1) natural gas or propane fired boiler, identified as 600b, constructed in 1992, maximum capacity: 1.50 million British thermal units per hour. [326 IAC 6-2-4]

- (13) One (1) No. 2 fuel oil fired boiler/ hot water heater, identified as 600c, constructed in 1992, maximum capacity: 0.40 million British thermal units per hour. [326 IAC 6-2-4]
- (14) One (1) natural gas or propane fired boiler, identified as 669, constructed in 1998, maximum capacity: 0.90 million British thermal units per hour. [326 IAC 6-2-4]
- (15) One (1) natural gas or propane fired boiler, identified as 683, constructed in 1993, maximum capacity: 0.40 million British thermal units per hour. [326 IAC 6-2-4]
- (16) One (1) natural gas or propane fired boiler, identified as 687, constructed in 1997, maximum capacity: 1.703 million British thermal units per hour. [326 IAC 6-2-4]
- (17) One (1) propane fired boiler, identified as 715, constructed in 1993, maximum capacity: 0.08 million British thermal units per hour. [326 IAC 6-2-4]
- (18) One (1) boiler, fired by natural gas, identified as B592, constructed in 1997, equipped with a low NO<sub>x</sub> burner, capacity: 5.02 million British thermal units per hour. [326 IAC 6-2-4]**
- (19) One (1) boiler, identified as boiler 591a, constructed in 1987, fired by natural gas, capacity: 2.049 million British thermal units per hour. [326 IAC 6-2-4]**
- (20) One (1) boiler, identified as boiler 600a, constructed in 1986, fired by natural gas as a primary fuel and propane as a backup fuel, capacity: 2.025 million British thermal units per hour. [326 IAC 6-2-4]**
- ~~(18)~~**(21)** One-hundred and ten (110) natural gas fired infrared heaters, maximum capacity: 20.70 million British thermal units per hour, total.
- (b) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6. Several cold cleaner degreasing units using only non-halogenated solvents. [326 IAC 8-3-2][326 IAC 8-3-5]
- (c) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment. [326 IAC 6-3]
- (d) Grinding and machining operations controller with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations. [326 IAC 6-3]
- (e) Activities or categories of activities with HAP emissions greater than 1 pound per day but less than 12.5 pounds per day or 2.5 tons per year of any combination of HAPs:
  - (1) Installation of compass and global positioning equipment and replacing radar equipment on Air Force planes in Nose Dock 2 (including painting operations). [326 IAC 6-3]
  - (2) Fuel cell repair
  - (3) JP-8 fuel handling

- (4) Low point draw box remediation
- (f) The following activities or categories with emissions below insignificant thresholds:
  - (1) Four (4) media blasters, equipped with 99% efficient bag filters, operating an average of three (3) hours per day. [326 IAC 6-3]
  - (2) One (1) firing range bullet trap equipped with dust collector. [326 IAC 6-3]
  - ~~(3) One (1) No. 2 fuel oil tank, identified as 600, installed in 1986, capacity: 12,000 gallons. [326 IAC 12][40 CFR 60.116b]~~
  - ~~(4) One (1) No. 2 fuel oil underground tank, identified as 592A, installed in 1998, capacity: 15,000 gallons. [326 IAC 12][40 CFR 60.116b]~~
  - ~~(5)~~**(3)** Two (2) propylene glycol above ground storage tanks, identified as 381 and 382, constructed in 1991, capacity: 25,000 gallons, each.[326 IAC 12][40 CFR 60.116b]
  - ~~(6)~~**(4)** One (1) fuel oil tank, identified as 235, installed in 1976, capacity: 420,000 gallons.
  - ~~(7)~~**(5)** One (1) diesel tank, identified as 380, installed in 1991, capacity: 10,000 gallons.
  - ~~(8)~~**(6)** One (1) diesel tank, identified as 447, installed in 1995, capacity: 10,000 gallons.
  - ~~(9)~~**(7)** One (1) diesel aboveground storage tank, identified as 593B, installed in 2001, capacity: 2,000 gallons.
  - ~~(10)~~**(8)** One (1) JP-8 aboveground storage tank, identified as 593A, installed in 2001, capacity: 2,000 gallons.
  - ~~(11) Two (2) No. 2 fuel oil underground storage tanks, identified as 595 and 597, installed in 1993 and 1985, capacity: 4,000 gallons, each.~~
  - ~~(12)~~**(9)** One (1) diesel underground storage tank, identified as 419C, installed in 1987, capacity: 10,000 gallons.
  - ~~(13) One (1) No. 2 fuel oil underground storage tank, identified as 591A, installed in 1998, capacity: 5,000 gallons.~~
  - ~~(14)~~**(10)** Two (2) fuel oil above ground storage tanks, identified as 683 and 440, capacity: less than 1,000 gallons.
  - ~~(15)~~**(11)** One (1) propane storage tank, capacity: 10,000 gallons.
  - ~~(16)~~**(12)** One (1) propane storage tank, capacity: 4,000 gallons.
  - ~~(17)~~**(13)** Several propane tanks equal or less than 1,000 gallons.
  - ~~(18)~~**(14)** Twenty-two (22) diesel above ground storage tanks, capacity: less than 1,000 gallons.
  - ~~(19)~~**(15)** One (1) JP-8 above ground storage tank, identified as 404, constructed in 1995,

capacity: 500 gallons.

~~(20)~~**(16)** One (1) used oil storage tank, identified as 420, constructed in 1993, capacity: 300 gallons.

~~(24) — One (1) underground diesel storage tank, identified as 663, capacity: 1,000 gallons.~~

- (g) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 British thermal units per hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 British thermal units per hour.
- (h) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons, consisting of two (2) gasoline underground storage tanks, identified as 419A and 419B, capacity: 10,000 gallons, each.
- (i) Petroleum fuel other than gasoline dispensing facility, having a storage tank capacity less than or equal to ten thousand five hundred (10,500) gallons, and dispensing three thousand five hundred (3,500) gallons per day or less.
- (j) VOC and HAP storage tanks with capacities less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.
- (k) Groundwater oil recovery wells.
- (l) Any operation using aqueous solutions containing less than one percent (1%) by weight of VOCs excluding HAPs.
- (m) Stockpiled soils from soil remediation activities that are covered and waiting transport for disposal.
- (n) Paved and unpaved roads and parking lots with public access.
- (o) Asbestos abatement projects regulated by 326 IAC 14-10.
- (p) Purging of gas lines and vessels that is related to routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process.
- (q) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment.
- (r) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (s) On-site fire and emergency response training approved by the department.
- (t) Emergency generators as follows:
  - Gasoline generators not exceeding 110 horsepower.
  - Diesel generators not exceeding 1,600 horsepower.

Natural gas turbines or reciprocating engines not exceeding 16,000 horsepower.

#### **SECTION D.4 — FACILITY OPERATION CONDITIONS**

##### **Facility Description [326 IAC 2-8-4(10)]:**

- (f) — One (1) boiler, fired by natural gas and No. 2 fuel oil, identified as B592, constructed in 1997, equipped with a low NO<sub>x</sub> burner, capacity: 5.02 million British thermal units per hour when operating on natural gas and 6.29 million British thermal units per hour when operating on No. 2 fuel oil.
- (g) — One (1) boiler, identified as boiler 591a, constructed in 1987, fired by natural gas or No. 2 fuel oil, capacity: 2.049 million British thermal units per hour when operating on natural gas and 1.988 million British thermal units when operating on No. 2 fuel oil.
- (h) — One (1) boiler, identified as boiler 600a, constructed in 1986, fired by natural gas as a primary fuel and propane or No. 2 fuel oil as backup fuels, capacity: 2.025 million British thermal units per hour when operating on natural gas or propane, and 2.1 million British thermal units per hour when operating on No. 2 fuel oil.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

##### **Emission Limitations and Standards [326 IAC 2-8-4(1)]**

###### **D.4.1 — Particulate Matter Limitation (PM) [326 IAC 6-2-4]**

Pursuant to 326 IAC 6-2-4, the PM emissions from the:

- (a) — one (1) boiler (B592) shall not exceed 0.25 pounds per million British thermal units;
- (b) — one (1) boiler (591a) shall not exceed 0.25 pounds per million British thermal units; and
- (c) — one (1) boiler (600a) shall not exceed 0.25 pounds per million British thermal units.

These limitations were computed using the following equation:

$$Pt = 1.09/Q^{0.26}$$

where:

Pt = Pounds of particulate matter emitted per million British thermal units (lb/MMBtu) heat input

Q = Total source maximum operating capacity rating in million British thermal units per hour (MMBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

###### **D.4.2 — Nonapplicable Requirements**

Operation Condition 4 from CP 103-2636-00008, issued on December 18, 1992, which states, "That

~~the amount of natural gas usage for the boilers (No. 3, 4 and 5) shall be limited to 1324.2 million cubic feet per year, based on a twelve month average rolled on a monthly basis. During the first 12 months of operation, natural usage shall be limited such that total natural gas usage divided by the months of operation shall not exceed 110.35 million cubic feet per year, and Operation Condition 5 from CP 103-2636-00008, issued on December 18, 1992, which states, "That the amount of # 2 fuel oil usage for the boilers (#3, 4, and 5) shall be limited to 4,660,062 gallons per year, based on a twelve month average rolled on a monthly basis. During the first 12 months of operation, fuel oil usage shall be limited such that total fuel oil usage divided by the months of operation shall not exceed 388,338.5 gallons per month. For each gallon of fuel used, the natural gas usage shall be reduced by 142.8 cubic feet. Therefore, this conditions and condition Nos. 4, 6, and 7 will make the Prevention of Significant Deterioration (PSD) rules, 326 IAC 2-2 and 40 CFR 52.21 not applicable," and all conditions in Section D.1 (D.1.1 through D.1.9) of T 103-7426-00008, issued on December 1, 1999, are not applicable because the five (5) boilers (BOI1, BOI2, BOI3, BOI4, and BOI5) have been removed from this source. Therefore, Operation Conditions 4 and 5 from CP 103-2636-00008, issued on December 18, 1992, and Conditions D.1.1 through D.1.9 of T 103-7426-00008, issued on December 1, 1999 are hereby rescinded.~~

#### **Compliance Determination Requirements**

~~There are no Compliance Determination Requirements applicable to these emission units.~~

#### **Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]**

##### ~~D.4.3 Visible Emissions Notations~~

- ~~(a) Visible emission notations of each of the boiler stacks exhausts shall be performed once per shift during normal daylight operations when operating on No. 2 fuel oil and exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.~~
- ~~(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.~~
- ~~(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.~~
- ~~(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.~~
- ~~(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.~~

#### **Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]**

##### ~~D.4.4 Record Keeping Requirements~~

- ~~(a) To document compliance with Condition D.4.3, the Permittee shall maintain records of visible emission notations of the boiler stacks exhausts once per shift.~~
- ~~(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.~~



**D.4.5 Reporting Requirements**

~~The natural gas fired boiler certification, shall be submitted to the address listed in Section C - General Reporting Requirements, using the reporting form located at the end of this permit, or its equivalent, within thirty (30) days after the end of the six (6) month period being reported. The report submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).~~

**SECTION D.5 D.4**

**FACILITY OPERATION CONDITIONS**

**Facility Description [326 IAC 2-8-4(10)]: Insignificant Activities**

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour, propane or liquified petroleum gas or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) British thermal units per hour, and fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) British thermal units per hour and firing fuel containing less than five-tenths (0.5) percent sulfur by weight, including, but not limited to, the following (all boilers are specified):
  - (1) Twenty-nine (29) boilers and seven (7) water heaters, constructed in 2000, consisting of the following: [326 IAC 6-2-4]
    - (A) One (1) natural gas fired boiler, identified as Boiler 100, located in Building 100, maximum capacity: 0.650 million British thermal units per hour.
    - (B) One (1) natural gas fired boiler, identified as Boiler 209A, located in Building 209, maximum capacity: 3.0 million British thermal units per hour.
    - (C) One (1) natural gas fired boiler and one (1) water heater, located in Building 325, maximum capacity: 1.05 million British thermal units per hour, total.
    - (D) One (1) natural gas fired boiler and one (1) water heater, located in Building 327, maximum capacity: 2.0 million British thermal units per hour, total.
    - (E) One (1) natural gas fired boiler and one (1) water heater, located in Building 328, maximum capacity: 2.0 million British thermal units per hour, total.
    - (F) One (1) natural gas fired boiler and one (1) water heater, located in Building 329, maximum capacity: 2.0 million British thermal units per hour, total.
    - (G) One (1) natural gas fired boiler, identified as Boiler 330, located in Building 330, maximum capacity: 0.850 million British thermal units per hour.
    - (H) One (1) natural gas fired boiler and one (1) water heater, located in Building 331, maximum capacity: 2.0 million British thermal units per hour.
    - (I) One (1) natural gas fired boiler and one (1) water heater, located in Building 332, maximum capacity: 2.0 million British thermal units per hour, total.
    - (J) One (1) natural gas fired boiler and one (1) water heater, located in Building 333, maximum capacity: 2.0 million British thermal units per hour, total.

**Facility Description [326 IAC 2-8-4(10)]: Insignificant Activities - Continued**

- (K) Four (4) natural gas fired boilers, located in Building 426, maximum capacity: 0.35 million British thermal units per hour.
- (L) One (1) natural gas fired boiler, identified as Boiler 427, located in Building 427, maximum capacity: 0.9 million British thermal units per hour.
- (M) One (1) natural gas fired boiler, identified as Boiler 430, located in Building 430, maximum capacity: 0.450 million British thermal units per hour.
- (N) One (1) natural gas fired boiler, identified as Boiler 435, located in Building 435, maximum capacity: 0.85 million British thermal units per hour.
- (O) One (1) natural gas fired boiler, identified as Boiler 431, located in Building 431, maximum capacity: 0.450 million British thermal units per hour.
- (P) One (1) natural gas fired boiler, identified as Boiler 448, located in Building 448, maximum capacity: 0.650 million British thermal units per hour.
- (Q) One (1) natural gas fired boiler, identified as Boiler 453, located in Building 453, maximum capacity: 0.105 million British thermal units per hour.
- (R) One (1) natural gas fired boiler, identified as Boiler 596A, located in Building 596, maximum capacity: 1.20 million British thermal units per hour.
- (S) One (1) natural gas fired boiler, identified as Boiler 596B, located in Building 596, maximum capacity: 0.040 million British thermal units per hour.
- (T) One (1) natural gas fired boiler, identified as Boiler 663, located in Building 663, maximum capacity: 1.8 million British thermal units per hour.
- (U) One (1) natural gas fired boiler, identified as Boiler 667, located in Building 667, maximum capacity: 0.6 million British thermal units per hour.
- (V) One (1) natural gas fired boiler, identified as Boiler 668a, located in Building 668, maximum capacity: 0.450 million British thermal units per hour.
- (W) One (1) natural gas fired boiler, identified as Boiler 670, located in Building 670, maximum capacity: 0.65 million British thermal units per hour.
- (X) Three (3) natural gas fired boilers, located in Building 671, maximum capacity: 0.66 million British thermal units per hour, total.
- (2) One (1) natural gas fired boiler, identified as 668b, constructed in February 2001, maximum capacity: 0.45 million British thermal units per hour. [326 IAC 6-2-4]
- (3) One (1) natural gas and propane fired boiler, identified as 233, constructed in 1999, maximum capacity: 0.45 million British thermal units per hour. [326 IAC 6-2-4]
- (4) One (1) natural gas and No. 2 fuel oil fired boiler, identified as 440, constructed in 1992, maximum capacity: 0.151 million British thermal units per hour. [326 IAC 6-2-4]

**Facility Description [326 IAC 2-8-4(10)]: Insignificant Activities - Continued**

- (5) One (1) No. 2 fuel oil fired boiler, identified as 591b, constructed in 1992, maximum capacity: 0.25 million British thermal units per hour. [326 IAC 6-2-4]
- (6) One (1) natural gas fired boiler, identified as 563a, constructed in 1991, maximum capacity: 0.40 million British thermal units per hour. [326 IAC 6-2-4]
- (7) One (1) natural gas fired boiler, identified as 563b, constructed in 1979, maximum capacity: 0.08 million British thermal units per hour. [326 IAC 6-2-3]
- (8) One (1) natural gas fired boiler, identified as 593a, constructed in 1992, maximum capacity: 0.40 million British thermal units per hour. [326 IAC 6-2-4]
- (9) One (1) natural gas fired boiler, identified as 593b, constructed in 1989, maximum capacity: 0.40 million British thermal units per hour. [326 IAC 6-2-4]
- (10) One (1) natural gas and No. 2 fuel oil fired boiler, identified as 595, constructed in 1988, maximum capacity: 0.40 million British thermal units per hour. [326 IAC 6-2-4]
- (11) One (1) natural gas or No. 2 fuel oil fired boiler, identified as 597, constructed in 1985, maximum capacity: 1.611 million British thermal units per hour. [326 IAC 6-2-4]
- (12) One (1) natural gas or propane fired boiler, identified as 600b, constructed in 1992, maximum capacity: 1.50 million British thermal units per hour. [326 IAC 6-2-4]
- (13) One (1) No. 2 fuel oil fired boiler/ hot water heater, identified as 600c, constructed in 1992, maximum capacity: 0.40 million British thermal units per hour. [326 IAC 6-2-4]
- (14) One (1) natural gas or propane fired boiler, identified as 669, constructed in 1998, maximum capacity: 0.90 million British thermal units per hour. [326 IAC 6-2-4]
- (15) One (1) natural gas or propane fired boiler, identified as 683, constructed in 1993, maximum capacity: 0.40 million British thermal units per hour. [326 IAC 6-2-4]
- (16) One (1) natural gas or propane fired boiler, identified as 687, constructed in 1997, maximum capacity: 1.703 million British thermal units per hour. [326 IAC 6-2-4]
- (17) One (1) propane fired boiler, identified as 715, constructed in 1993, maximum capacity: 0.08 million British thermal units per hour. [326 IAC 6-2-4]
- (18) **One (1) boiler, fired by natural gas, identified as B592, constructed in 1997, equipped with a low NO<sub>x</sub> burner, capacity: 5.02 million British thermal units per hour. [326 IAC 6-2-4]**
- (19) **One (1) boiler, identified as boiler 591a, constructed in 1987, fired by natural gas, capacity: 2.049 million British thermal units per hour. [326 IAC 6-2-4]**
- (20) **One (1) boiler, identified as boiler 600a, constructed in 1986, fired by natural gas as a primary fuel and propane as a backup fuel, capacity: 2.025 million British thermal units per hour. [326 IAC 6-2-4]**

**Facility Description [326 IAC 2-8-4(10)]: Insignificant Activities - Continued**

- (b) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6. Several cold cleaner degreasing units using only non-halogenated solvents. [326 IAC 8-3-2][326 IAC 8-3-5]
- (c) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment. [326 IAC 6-3]
- (d) Grinding and machining operations controller with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations. [326 IAC 6-3]
- (e) Activities or categories of activities with HAP emissions greater than 1 pound per day but less than 12.5 pounds per day or 2.5 tons per year of any combination of HAPs:
  - Installation of compass and global positioning equipment and replacing radar equipment on Air Force planes in Nose Dock 2 (including painting operations). [326 IAC 6-3]
- (f) The following activities or categories with emissions below insignificant thresholds:
  - (1) Four (4) media blasters, equipped with 99% efficient bag filters, operating an average of three (3) hours per day. [326 IAC 6-3]
  - (2) One (1) firing range bullet trap equipped with dust collector. [326 IAC 6-3]
  - (3) ~~One (1) No. 2 fuel oil tank, identified as 600, installed in 1986, capacity: 12,000 gallons. [326 IAC 12][40 CFR 60.116b]~~
  - (4) ~~One (1) No. 2 fuel oil underground tank, identified as 592A, installed in 1998, capacity: 15,000 gallons. [326 IAC 12][40 CFR 60.116b]~~
  - (5)(3) Two (2) propylene glycol above ground storage tanks, identified as 381 and 382, constructed in 1991, capacity: 25,000 gallons, each.[326 IAC 12][40 CFR 60.116b]

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

**D.5 4.1 Standards of Performance for Volatile Organic Liquid Storage Vessels [326 IAC 12][40 CFR 60.116b]**

The two (2) propylene glycol storage tanks, identified as 381 and 382, ~~and two (2) No. 2 fuel oil tanks, identified as 600 and 592A,~~ shall comply with the New Source Performance Standards (NSPS), 326 IAC 12 (40 CFR Part 60.116b, Subpart Kb). 40 CFR Part 60.116b paragraphs (a) and (b) require the Permittee to maintain accessible records showing the dimension of each storage vessel and an analysis showing the capacity of the storage vessel. Records shall be kept for the life of the storage tanks.

**D.5 4.2 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR 60, Subpart A]**

The provisions of 40 CFR 60 Subpart A - General Provisions, which are incorporated as 326 IAC

12-1, apply to the two (2) propylene glycol storage tanks, identified as 381 and 382, and two (2) ~~No. 2 fuel oil tanks, identified as 600 and 592A~~, described in this section except when otherwise specified in 40 CFR 60 Subpart Kb.

#### D.5 4.3 Particulate Matter Limitation (PM) [326 IAC 6-2-3]

Pursuant to 326 IAC 6-2-3, the PM emissions from the one (1) boiler (563b) shall not exceed 0.13 pound per million British thermal units heat input.

This limitation is based on the following equation:

$$Pt = C \times a \times h / 76.5 \times Q^{0.75} \times N^{0.25}$$

where:

Pt = Pounds of particulate matter emitted per million British thermal units (lb/MMBtu) heat input

Q = Total source maximum operating capacity rating in million British thermal units per hour (MMBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

C = Maximum ground level concentration with respect to distance from the point source at the "critical" wind speed for level terrain. This shall equal 50 micrograms per cubic meter for a period not to exceed a sixty (60) minute time period.

N = Number of stacks in fuel burning operation.

a = Plume rise factor which is used to make allowance for less than theoretical plume rise. The value 0.67 shall be used for Q less than or equal to 1,000 MMBtu/hr heat input. The value 0.8 shall be used for Q greater than 1,000 MMBtu/hr heat input.

h = Stack height in feet.

#### D.5 4.4 Particulate Matter Limitation (PM) [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4, the PM emissions from the insignificant boilers constructed after September 21, 1983 shall be limited as follows:

Year Constructed	Boilers Constructed	PM Emission Limitation for each boiler (lbs/MMBtu) (Pt)
1985	597	0.25
<b>1986</b>	<b>600a</b>	<b>0.25</b>
<b>1987</b>	<b>591a</b>	<b>0.25</b>
1988	595	0.25
1989	593b	0.25
1991	563a	0.25

Year Constructed	Boilers Constructed	PM Emission Limitation for each boiler (lbs/MMBtu) (Pt)
1992	400, 591b, 593a, 600b and 600c	0.25
1993	683 and 715	0.25
1997	687	0.25
<b>1997</b>	<b>B592</b>	<b>0.25</b>
1998	669	0.25
1999	233	0.25
2000	Twenty-nine (29) boilers and seven (7) water heaters	0.24
2001	668b	0.40

These limitations are based on the following equation:

$$Pt = 1.09/Q^{0.26}$$

where:

Pt = Pounds of particulate matter emitted per million British thermal units (lb/MMBtu) heat input

Q = Total source maximum operating capacity rating in million British thermal units per hour (MMBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

#### **D.4.5 Nonapplicable Requirements**

Operation Condition 4 from CP 103-2636-00008, issued on December 18, 1992, which states, "That the amount of natural gas usage for the boilers (No. 3, 4 and 5) shall be limited to 1324.2 million cubic feet per year, based on a twelve month average rolled on a monthly basis. During the first 12 months of operation, natural usage shall be limited such that total natural gas usage divided by the months of operation shall not exceed 110.35 million cubic feet per year, and Operation Condition 5 from CP 103-2636-00008, issued on December 18, 1992, which states, "That the amount of # 2 fuel oil usage for the boilers (#3, 4, and 5) shall be limited to 4,660,062 gallons per year, based on a twelve month average rolled on a monthly basis. During the first 12 months of operation, fuel oil usage shall be limited such that total fuel oil usage divided by the months of operation shall not exceed 388,338.5 gallons per month. For each gallon of fuel used, the natural gas usage shall be reduced by 142.8 cubic feet. Therefore, this condition and condition Nos. 4, 6, and 7 will make the Prevention of Significant Deterioration (PSD) rules, 326 IAC 2-2 and 40 CFR 52.21 not applicable," and all conditions in Section D.1 (D.1.1 through D.1.9) of T 103-7426-00008, issued on December 1, 1999, are not applicable because the five (5) boilers (BOI1, BOI2, BOI3, BOI4, and BOI5) have been removed from this source. Therefore, Operation Conditions 4 and 5 from CP 103-2636-00008, issued on December 18, 1992, and Conditions D.1.1 through D.1.9 of T 103-7426-00008,

**issued on December 1, 1999 are hereby rescinded.**

**D.5-54.6 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]**

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations) for cold cleaning operations constructed after January 1, 1980, the owner or operator shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

**D.5-64.7 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]**

(a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser without remote solvent reservoirs constructed after July 1, 1990, shall ensure that the following requirements are met:

- (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
  - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF));
  - (B) The solvent is agitated; or
  - (C) The solvent is heated.
- (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
- (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
- (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
- (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32)

millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9EC) (one hundred twenty degrees Fahrenheit (120EF)):

- (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
  - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
  - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility construction of which commenced after July 1, 1990, shall ensure that the following operating requirements are met:
- (1) Close the cover whenever articles are not being handled in the degreaser.
  - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
  - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

**D.5.74.8 Particulate Matter Limitation (PM) [326 IAC 6-3-2]**

Pursuant to 326 IAC 6-3-2 (Process Operations), the allowable PM emission rate from the grinding and machining operations, four (4) media blasters, one (1) firing range bullet trap, and the brazing, cutting, soldering, and welding shall not exceed 0.551 pounds per hour for process weight rates of less than 100 pounds per hour. For process weight rates of 100 pounds per hour or more, the allowable PM emission rate shall be based on the following equations:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

or

Interpolation and extrapolation of the data for the process weight rate in excess of 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11 - 40} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

**Compliance Determination Requirement**

**D.5.84.9 Particulate Matter (PM)**

In order to comply with ~~D.5.7~~ **D.4.8**, the bag filters shall be in operation at all times when the four (4) media blasters are in operation and the dust collector shall be in operation at all times when the one (1) firing range bullet trap was in operation.



### Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

There are no specific Compliance Monitoring Requirements applicable to these emission units.

### Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

#### D.5-94.10 Standards of Performance for Volatile Organic Liquid Storage Vessels [326 IAC 12][40 CFR 60.116b]

The Permittee shall maintain accessible records showing the dimension of the two (2) propylene glycol storage tanks, identified as 381 and 382, ~~and two (2) No. 2 fuel oil tanks, identified as 600 and 592A,~~ and an analysis showing the capacity of the storage vessel. Records shall be kept for the life of the storage tanks. A copy of 40 CFR Part 60, Subpart Kb, is attached.

#### Comment 2:

Section D.1.9. Since the equipment and coatings associated with the internal and external paint areas in the nose docks are kept in building 453, where the paint booth is housed, and the location of the internal and external paint areas can move between nose docks 1 through 6 with each paint job, request that Section D.1.9 be changed to indicate that the records associated with painting in the nose docks will be kept at building 453, along with the paint booth records. There are currently no administrative areas in the nose docks dedicated to painting, and the personnel who keep the records and perform the painting operations are located in building 453.

#### Response 2:

Due to these circumstances, Condition D.1.9 is revised as follows:

#### D.1.9 Record Keeping Requirements

- (a) To document compliance with Conditions D.1.1(a) and D.1.2, the Permittee shall maintain records at **building 453** for the one (1) spray paint booth located in building 453, one (1) interior parts paint area and one (1) airplane exterior paint area in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC and HAP usage limits established in Conditions D.1.1(a) and D.1.2.
  - (1) The amount and VOC and HAP content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
  - (2) A log of the dates of use;
  - (3) The cleanup solvent usage for each month;
  - (4) The total VOC and HAP usage for each month; and
  - (5) The weight of VOCs and HAPs emitted for each compliance period.
- (b) To document compliance with Condition D.1.1(b), the Permittee shall maintain records at **building 453** for the one (1) interior parts paint area in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken daily and shall be complete and sufficient to establish compliance with the VOC usage limits established in Condition D.1.1(b).

- (1) The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
  - (2) A log of the dates of use;
  - (3) The cleanup solvent usage for each day;
  - (4) The total VOC usage for each day; and
  - (5) The weight of VOCs emitted for each compliance period.
- (c) To document compliance with Condition D.1.8, the Permittee shall maintain a log of weekly overspray observations and monthly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**Comment 3:**

Since boilers 591, 592, and 600 are now insignificant sources, the visible emissions notations in Sections D.4.3 and D.4.4 will no longer be required. Please change the permit accordingly.

**Response 3:**

The visible emission notations required by Conditions D.4.3 and D.4.4 have been removed as shown in Response 1.

**Comment 4:**

Page 12 of 24 of the technical support document, section (c). This section indicates that at one time, Grissom has emitted 100 tons or more of SO<sub>2</sub> within a calendar year. Please provide Grissom with the dates for this level of SO<sub>2</sub> emissions. Additionally, if this level of emissions was associated with the central heat plant, which Grissom no longer owns, does it still apply to Grissom?

**Response 4:**

Grissom Air Reserve Base emitted SO<sub>2</sub> at or above major source levels prior to removal of boilers BOI1 through BOI5. Since the boilers have been removed and emission levels are limited below that which would make this source a major Prevention of Significant Deterioration (PSD) source pursuant to 326 IAC 2-2 and 40 CFR 52.21, the source will now be considered a minor source pursuant to 326 IAC 2-2, PSD.

*On August 6, 2001, Lisa Marx of Grissom Air Reserve Base submitted an additional comment to IDEM, OAQ, indicating that Colonel Christopher M. Joniec has been promoted to Brigadier General Christopher M. Joniec.*

To reflect these changes, the source status and authorized individual in Condition A.1 are corrected, and Condition C.1 has been revised to state that PM emissions cannot be increased to 250 tons per year or more without changing the source status. Changes to the FESOP are as follows:

A.1 General Information [326 IAC 2-8-3(b)]

The Permittee owns and operates a stationary military base source.

Authorized Individual:	<del>Colonel</del> <b>Brigadier General</b> Christopher M. Joniec
Source Address:	Grissom Air Reserve Base, Grissom, Indiana 46971-5000
Mailing Address:	434 SPTG/CEV, Room 124, 641 Readiness Circle, Grissom, Indiana 46971-5000
General Source Phone Number:	(765) 688-4770
SIC Code:	9711
County Location:	Miami
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit (FESOP) <del>Major</del> <b>Minor</b> Source, under PSD Rules; Minor Source, Section 112 of the Clean Air Act

C.1 Overall Source Limit [326 IAC 2-8] **[326 IAC 2-2]**

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

- (1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period.
- (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
- (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

**(b) Any change or modification that increases the potential to emit PM to 250 tons per year or more shall cause this source to become a major source pursuant to 326 IAC 2-2, PSD, and shall require prior OAQ approval.**

~~(b)~~**(c)** This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.

~~(c)~~**(d)** Section D of this permit contains independently enforceable provisions to satisfy this requirement.

**Comment 5:**

Attached are the newest coating material safety data sheets for the coatings used in the paint booth located in building 453, the internal paint area, and the external paint area.

**Response 5:**

The emissions from the paint booth located in building 453, the internal parts paint area and the external paint area must continue to comply with the conditions of this FESOP. There are no

changes to the permit as a result of the updated material safety data sheets.

On August 6, 2001, Jeffrey A. Woodring, P.E, of Grissom Air Reserve Base, submitted additional comments on the proposed FESOP. The comments are as follows (The permit language, if changed, has deleted language as ~~strikeouts~~ and new language **bolded**.):

**Comment 6:**

The Indiana Department of Environmental Management (IDEM) is currently revising a draft Federally Enforceable State Operating Permit (FESOP) for Grissom Air Reserve Base (GARB) (103-13875-00008), to downgrade GARB from a Title V air permit to a FESOP. GARB requests a change to the draft FESOP to include additional spray paint guns. Currently, the draft FESOP includes eight (8) high volume low pressure (HVLP) spray guns and one (1) electrostatic HVLP spray gun stored in building 453 and used in the spray paint booth in building 453, the interior parts paint area, and the airplane exterior paint area. GARB will be retaining the current spray paint guns and plans to add two (2) HVLP spray guns and two (2) HVLP stencil mini spray guns. After the addition, the total number of spray guns GARB will have stored in building 453 for use in the paint booth in building 453, the interior parts paint area, and the airplane exterior paint area will be ten (10) HVLP spray guns, one (1) electrostatic HVLP spray gun, and two (2) HVLP stencil mini spray guns. The additional spray guns will not increase air emissions from the paint booth in building 453, the interior parts paint area, or the airplane exterior paint area. The new spray paint guns will be used as spare or alternate equipment to the existing guns. The spray painting operations in the paint booth in building 453, the interior parts paint area, and the airplane exterior paint area will continue to be batch and intermittent. GARB will retain the same air emission limitations currently listed in GARB's draft FESOP.

**Response 6:**

Since the potential to emit from the painting operations at Grissom Air Reserve Base is dependent only upon the throughput of airplanes and airplane parts, the increase in the number of spray guns will not increase the potential to emit from those operations. Therefore, item (a) of the facility description in Section A.2 and the facility description box in Section D.1 is revised as follows:

- (a) One (1) spray paint booth, located in building 453, constructed in 1989, equipped with ~~eight (8)~~ **ten (10)** high volume low pressure (HVLP) spray guns, **two HVLP (2) stencil mini spray guns** and one (1) electrostatic HVLP spray gun, capacity: 1 aircraft panel per hour.

Upon further review, the OAQ has decided to make the following changes to the FESOP. The permit language is changed to read as follows (deleted language appears as ~~strikeouts~~, new language is **bolded**):

**Change 1:**

Condition B.10 has been revised to clarify that all conditions of this FESOP are enforceable, as follows:

**B.10 Compliance with Permit Conditions [326 IAC 2-8-4(5)(A)] [326 IAC 2-8-4(5)(B)]**

- (a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit, ~~except those specifically designated as not federally enforceable,~~ is grounds for:

- (1) Enforcement action;
  - (2) Permit termination, revocation and reissuance, or modification; and
  - (3) Denial of a permit renewal application.
- (b) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- (c) An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in condition B, Emergency Provisions.

**Change 2:**

Since this source currently has a Part 70 Operating Permit, the Preventive Maintenance Plans should have been submitted within ninety (90) days of issuance of that permit. Therefore, Condition B.13 is revised as follows:

**B.13 Preventive Maintenance Plan [326 IAC 1-6-3] [326 IAC 2-8-4(9)] [326 IAC 2-8-5(a)(1)]**

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall ~~prepare and maintain~~ **and implement** Preventive Maintenance Plans (PMPs) ~~within ninety (90) days after issuance of this permit,~~ including the following information on each facility:
- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

~~If due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:~~

~~Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015~~

~~The PMP and the PMP extension notification do not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).~~

- (b) The Permittee shall implement the PMPs as necessary to ensure that failure to implement a PMP does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or

contributes to any violation. The PMP does not require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

- (d) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

### Change 3:

Since the requirements of 326 IAC 6-3-2 (Process Operations) limits the potential to emit PM from the one (1) grit blast room to 2.16 tons per year, and PM emissions from this process are equal to PM<sub>10</sub> emissions, the PM<sub>10</sub> limit in Condition D.2.2 has been revised to be equal to the PM limit in Condition D.2.2.

#### D.2.2 Particulate Matter (PM<sub>10</sub>) [326 IAC 2-8-4]

The PM<sub>10</sub> emissions from the one (1) grit blast room, located in building 426, shall not exceed ~~40.7~~ **2.16** pounds per hour, **which is equivalent to the allowable PM emission rate 47.0 tons per year, which represents the total unrestricted potential to emit for the one (1) grit blast room. This will limit the potential to emit PM<sub>10</sub> from this facility to 9.46 tons per year.** Therefore, the requirements of 326 IAC 2-7 do not apply and no record keeping or reporting is required.

### Change 4:

Since the record keeping requirements of Standards of Performance for Volatile Organic Liquid Storage Vessels (326 IAC 12 and 40 CFR 60.116b) were applicable to this source prior to the issuance of this permit, and a copy of 40 CFR Part 60, Subpart Kb, was attached to T103-7426-00008, issued on December 1, 1999, Condition D.3.4 is revised as follows:

#### D.3.4 Standards of Performance for Volatile Organic Liquid Storage Vessels [326 IAC 12][40 CFR 60.116b]

The Permittee shall maintain accessible records showing the dimension of the two (2) propylene glycol storage tanks, identified as 383 and 384, and an analysis showing the capacity of the storage vessel. Records shall be kept for the life of the storage tanks. ~~A copy of 40 CFR Part 60, Subpart Kb, is attached.~~

### Change 5:

For clarity, all insignificant activities, including those with no applicable rules, have been added to the Facility Description Box in Section D.5 (now D.4) as follows:

**Facility Description [326 IAC 2-8-4(10)]: Insignificant Activities**

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour, propane or liquified petroleum gas or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) British thermal units per hour, and fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) British thermal units per hour and firing fuel containing less than five-tenths (0.5) percent sulfur by weight, including, but not limited to, the following (all boilers are specified):
  - (1) Twenty-nine (29) boilers and seven (7) water heaters, constructed in 2000, consisting of the following: [326 IAC 6-2-4]
    - (A) One (1) natural gas fired boiler, identified as Boiler 100, located in Building 100, maximum capacity: 0.650 million British thermal units per hour.
    - (B) One (1) natural gas fired boiler, identified as Boiler 209A, located in Building 209, maximum capacity: 3.0 million British thermal units per hour.
    - (C) One (1) natural gas fired boiler and one (1) water heater, located in Building 325, maximum capacity: 1.05 million British thermal units per hour, total.
    - (D) One (1) natural gas fired boiler and one (1) water heater, located in Building 327, maximum capacity: 2.0 million British thermal units per hour, total.
    - (E) One (1) natural gas fired boiler and one (1) water heater, located in Building 328, maximum capacity: 2.0 million British thermal units per hour, total.
    - (F) One (1) natural gas fired boiler and one (1) water heater, located in Building 329, maximum capacity: 2.0 million British thermal units per hour, total.
    - (G) One (1) natural gas fired boiler, identified as Boiler 330, located in Building 330, maximum capacity: 0.850 million British thermal units per hour.
    - (H) One (1) natural gas fired boiler and one (1) water heater, located in Building 331, maximum capacity: 2.0 million British thermal units per hour.
    - (I) One (1) natural gas fired boiler and one (1) water heater, located in Building 332, maximum capacity: 2.0 million British thermal units per hour, total.
    - (J) One (1) natural gas fired boiler and one (1) water heater, located in Building 333, maximum capacity: 2.0 million British thermal units per hour, total.
    - (K) Four (4) natural gas fired boilers, located in Building 426, maximum capacity: 0.35 million British thermal units per hour.
    - (L) One (1) natural gas fired boiler, identified as Boiler 427, located in Building 427, maximum capacity: 0.9 million British thermal units per hour.

**Facility Description [326 IAC 2-8-4(10)]: Insignificant Activities - Continued**

- (M) One (1) natural gas fired boiler, identified as Boiler 430, located in Building 430, maximum capacity: 0.450 million British thermal units per hour.
- (N) One (1) natural gas fired boiler, identified as Boiler 435, located in Building 435, maximum capacity: 0.85 million British thermal units per hour.
- (O) One (1) natural gas fired boiler, identified as Boiler 431, located in Building 431, maximum capacity: 0.450 million British thermal units per hour.
- (P) One (1) natural gas fired boiler, identified as Boiler 448, located in Building 448, maximum capacity: 0.650 million British thermal units per hour.
- (Q) One (1) natural gas fired boiler, identified as Boiler 453, located in Building 453, maximum capacity: 0.105 million British thermal units per hour.
- (R) One (1) natural gas fired boiler, identified as Boiler 596A, located in Building 596, maximum capacity: 1.20 million British thermal units per hour.
- (S) One (1) natural gas fired boiler, identified as Boiler 596B, located in Building 596, maximum capacity: 0.040 million British thermal units per hour.
- (T) One (1) natural gas fired boiler, identified as Boiler 663, located in Building 663, maximum capacity: 1.8 million British thermal units per hour.
- (U) One (1) natural gas fired boiler, identified as Boiler 667, located in Building 667, maximum capacity: 0.6 million British thermal units per hour.
- (V) One (1) natural gas fired boiler, identified as Boiler 668a, located in Building 668, maximum capacity: 0.450 million British thermal units per hour.
- (W) One (1) natural gas fired boiler, identified as Boiler 670, located in Building 670, maximum capacity: 0.65 million British thermal units per hour.
- (X) Three (3) natural gas fired boilers, located in Building 671, maximum capacity: 0.66 million British thermal units per hour, total.
- (2) One (1) natural gas fired boiler, identified as 668b, constructed in February 2001, maximum capacity: 0.45 million British thermal units per hour. [326 IAC 6-2-4]
- (3) One (1) natural gas and propane fired boiler, identified as 233, constructed in 1999, maximum capacity: 0.45 million British thermal units per hour. [326 IAC 6-2-4]
- (4) One (1) natural gas and No. 2 fuel oil fired boiler, identified as 440, constructed in 1992, maximum capacity: 0.151 million British thermal units per hour. [326 IAC 6-2-4]
- (5) One (1) No. 2 fuel oil fired boiler, identified as 591b, constructed in 1992, maximum capacity: 0.25 million British thermal units per hour. [326 IAC 6-2-4]
- (6) One (1) natural gas fired boiler, identified as 563a, constructed in 1991, maximum capacity: 0.40 million British thermal units per hour. [326 IAC 6-2-4]



**Facility Description [326 IAC 2-8-4(10)]: Insignificant Activities - Continued**

- (7) One (1) natural gas fired boiler, identified as 563b, constructed in 1979, maximum capacity: 0.08 million British thermal units per hour. [326 IAC 6-2-3]
  - (8) One (1) natural gas fired boiler, identified as 593a, constructed in 1992, maximum capacity: 0.40 million British thermal units per hour. [326 IAC 6-2-4]
  - (9) One (1) natural gas fired boiler, identified as 593b, constructed in 1989, maximum capacity: 0.40 million British thermal units per hour. [326 IAC 6-2-4]
  - (10) One (1) natural gas fired boiler, identified as 595, constructed in 1988, maximum capacity: 0.40 million British thermal units per hour. [326 IAC 6-2-4]
  - (11) One (1) natural gas fired boiler, identified as 597, constructed in 1985, maximum capacity: 1.611 million British thermal units per hour. [326 IAC 6-2-4]
  - (12) One (1) natural gas or propane fired boiler, identified as 600b, constructed in 1992, maximum capacity: 1.50 million British thermal units per hour. [326 IAC 6-2-4]
  - (13) One (1) No. 2 fuel oil fired boiler/ hot water heater, identified as 600c, constructed in 1992, maximum capacity: 0.40 million British thermal units per hour. [326 IAC 6-2-4]
  - (14) One (1) natural gas or propane fired boiler, identified as 669, constructed in 1998, maximum capacity: 0.90 million British thermal units per hour. [326 IAC 6-2-4]
  - (15) One (1) natural gas or propane fired boiler, identified as 683, constructed in 1993, maximum capacity: 0.40 million British thermal units per hour. [326 IAC 6-2-4]
  - (16) One (1) natural gas or propane fired boiler, identified as 687, constructed in 1997, maximum capacity: 1.703 million British thermal units per hour. [326 IAC 6-2-4]
  - (17) One (1) propane fired boiler, identified as 715, constructed in 1993, maximum capacity: 0.08 million British thermal units per hour. [326 IAC 6-2-4]
  - (18) One (1) boiler, fired by natural gas, identified as B592, constructed in 1997, equipped with a low NO<sub>x</sub> burner, capacity: 5.02 million British thermal units per hour. [326 IAC 6-2-4]
  - (19) One (1) boiler, identified as boiler 591a, constructed in 1987, fired by natural gas, capacity: 2.049 million British thermal units per hour. [326 IAC 6-2-4]
  - (20) One (1) boiler, identified as boiler 600a, constructed in 1986, fired by natural gas as a primary fuel and propane as a backup fuel, capacity: 2.025 million British thermal units per hour. [326 IAC 6-2-4]
  - (21) **One-hundred and ten (110) natural gas fired infrared heaters, maximum capacity: 20.70 million British thermal units per hour, total.**
- (b) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6. Several cold cleaner degreasing units using only non-halogenated solvents. [326 IAC 8-3-2][326 IAC 8-3-5]

**Facility Description [326 IAC 2-8-4(10)]: Insignificant Activities - Continued**

- (c) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment. [326 IAC 6-3]
- (d) Grinding and machining operations controller with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations. [326 IAC 6-3]
- (e) Activities or categories of activities with HAP emissions greater than 1 pound per day but less than 12.5 pounds per day or 2.5 tons per year of any combination of HAPs:
  - (1) Installation of compass and global positioning equipment and replacing radar equipment on Air Force planes in Nose Dock 2 (including painting operations). [326 IAC 6-3]
  - (2) **Fuel cell repair**
  - (3) **JP-8 fuel handling**
  - (4) **Low point draw box remediation**
- (f) The following activities or categories with emissions below insignificant thresholds:
  - (1) Four (4) media blasters, equipped with 99% efficient bag filters, operating an average of three (3) hours per day. [326 IAC 6-3]
  - (2) One (1) firing range bullet trap equipped with dust collector. [326 IAC 6-3]
  - (3) Two (2) propylene glycol above ground storage tanks, identified as 381 and 382, constructed in 1991, capacity: 25,000 gallons, each.[326 IAC 12][40 CFR 60.116b]
  - (4) **One (1) fuel oil tank, identified as 235, installed in 1976, capacity: 420,000 gallons.**
  - (5) **One (1) diesel tank, identified as 380, installed in 1991, capacity: 10,000 gallons.**
  - (6) **One (1) diesel tank, identified as 447, installed in 1995, capacity: 10,000 gallons.**
  - (7) **One (1) diesel aboveground storage tank, identified as 593B, installed in 2001, capacity: 2,000 gallons.**
  - (8) **One (1) JP-8 aboveground storage tank, identified as 593A, installed in 2001, capacity: 2,000 gallons.**
  - (9) **One (1) diesel underground storage tank, identified as 419C, installed in 1987, capacity: 10,000 gallons.**

- (10) Two (2) fuel oil above ground storage tanks, identified as 683 and 440, capacity: less than 1,000 gallons.
- (11) One (1) propane storage tank, capacity: 10,000 gallons.
- (12) One (1) propane storage tank, capacity: 4,000 gallons.
- (13) Several propane tanks equal or less than 1,000 gallons.
- (14) Twenty-two (22) diesel above ground storage tanks, capacity: less than 1,000 gallons.
- (15) One (1) JP-8 above ground storage tank, identified as 404, constructed in 1995, capacity: 500 gallons.
- (16) One (1) used oil storage tank, identified as 420, constructed in 1993, capacity: 300 gallons.
- (g) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 British thermal units per hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 British thermal units per hour.
- (h) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons, consisting of two (2) gasoline underground storage tanks, identified as 419A and 419B, capacity: 10,000 gallons, each.
- (i) Petroleum fuel other than gasoline dispensing facility, having a storage tank capacity less than or equal to ten thousand five hundred (10,500) gallons, and dispensing three thousand five hundred (3,500) gallons per day or less.
- (j) VOC and HAP storage tanks with capacities less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.
- (k) Groundwater oil recovery wells.
- (l) Any operation using aqueous solutions containing less than one percent (1%) by weight of VOCs excluding HAPs.
- (m) Stockpiled soils from soil remediation activities that are covered and waiting transport for disposal.
- (n) Paved and unpaved roads and parking lots with public access.
- (o) Asbestos abatement projects regulated by 326 IAC 14-10.
- (p) Purging of gas lines and vessels that is related to routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process.

- (q) **Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment.**
- (r) **Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.**
- (s) **On-site fire and emergency response training approved by the department.**
- (t) **Emergency generators as follows:**
  - Gasoline generators not exceeding 110 horsepower.**
  - Diesel generators not exceeding 1,600 horsepower.**
  - Natural gas turbines or reciprocating engines not exceeding 16,000 horsepower.**

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

**Change 6:**

The reports required by Conditions B.15 and C.17, and the test protocols required by Condition C.9 should be submitted to the Compliance Branch. The address to which these shall be submitted is revised in Conditions B.15, C.9 and C.17 as follows:

Indiana Department of Environmental Management  
Compliance ~~Data Section~~ **Branch**, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

**Change 7:**

The notification allowed by Condition C.11 must be submitted to the Compliance Branch, if one is submitted. The address in Condition C.11 is revised as follows:

Indiana Department of Environmental Management  
~~Air~~ Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

Indiana Department of Environmental Management  
Office of Air Quality

Technical Support Document (TSD)  
for a Federally Enforceable State Operating Permit (FESOP)

**Source Background and Description**

<b>Source Name:</b>	<b>Grissom Air Reserve Base</b>
<b>Source Location:</b>	<b>Grissom Air Reserve Base, Grissom, Indiana 46971-5000</b>
<b>County:</b>	<b>Miami</b>
<b>SIC Code:</b>	<b>9711</b>
<b>Operation Permit No.:</b>	<b>F 103-13875-00008</b>
<b>Permit Reviewer:</b>	<b>CarrieAnn Ortolani</b>

The Office of Air Quality (OAQ) has reviewed a FESOP application from Grissom Air Reserve Base relating to the operation of a military base.

**History**

This source was issued a Title V Operating Permit (T 103-7426-00008) on December 1, 1999. An application received on February 7, 2001, requested a transition from an Title V to a FESOP since five (5) existing boilers have been removed. The source will comply with a limited potential to emit of each criteria pollutant of less than one hundred (100) tons per year, due to the removal of the five (5) boilers (BO11 through BO15).

**Source Definition**

This military base consists of many buildings. All buildings at Grissom Air Reserve Base will be considered part of this source.

**Permitted Emission Units and Pollution Control Equipment**

- (a) One (1) spray paint booth, located in building 453, constructed in 1989, equipped with eight (8) high volume low pressure (HVLP) spray guns and one (1) electrostatic HVLP spray gun, capacity: 1 aircraft panel per hour.
- (b) One (1) interior parts paint area, located in one of the following nose docks (Nose Docks 1 through 6), using the HVLP spray applicators, rollers and brushes existing at building 453, used for coating the interior parts of planes that cannot be removed for painting at building 453, with coating operations beginning in the summer of 1996, capacity: 12 planes per year.
- (c) One (1) airplane exterior paint area, located in one of the following nose docks (Nose Docks 1 through 6), using the HVLP spray applicators, rollers and brushes existing at building 453, with coating operations beginning in August of 1995, capacity: 52 airplane exteriors per year.

- (d) One (1) grit blast room, located in building 426, constructed in 1989, equipped with a bag-house, capacity: 767 pounds of grit per hour.
- (e) One (1) bulk POL system, constructed in 1990, consisting of the following:
  - (1) Six (6) horizontal underground JP-8 storage tanks, known as 736-1, 736-2, 736-3, 736-4, 736-5 and 736-6, installed in 1954, capacity: 50,000 gallons, each.
  - (2) Four (4) vertical above ground JP-8 storage tanks, known as 400, 401, 402 and 403 installed in 1957, capacity: 630,000 gallons, each.
  - (3) One (1) vertical above ground JP-8 storage tank, known as 406, installed in 1961, capacity: 1,050,000 gallons.
  - (4) Two (2) horizontal above ground storage tanks, known as 383 and 384, installed in 1991, capacity: 25,000 gallons of propylene glycol, each.
- (f) One (1) boiler, fired by natural gas and No. 2 fuel oil, identified as B592, constructed in 1997, equipped with a low NO<sub>x</sub> burner, capacity: 5.02 million British thermal units per hour when operating on natural gas and 6.29 million British thermal units per hour when operating on No. 2 fuel oil.
- (g) One (1) boiler, identified as boiler 591a, constructed in 1987, fired by natural gas or No. 2 fuel oil, capacity: 2.049 million British thermal units per hour when operating on natural gas and 1.988 million British thermal units when operating on No. 2 fuel oil.
- (h) One (1) boiler, identified as boiler 600a, constructed in 1986, fired by natural gas as a primary fuel and propane or No. 2 fuel oil as backup fuels, capacity: 2.025 million British thermal units per hour when operating on natural gas or propane, and 2.1 million British thermal units per hour when operating on No. 2 fuel oil.

#### **Unpermitted Emission Units and Pollution Control Equipment**

There are no unpermitted facilities operating at this source during this review process.

#### **New Emission Units and Pollution Control Equipment Receiving Prior Approval**

There are no new facilities proposed at this source during this review process.

#### **Insignificant Activities**

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour, propane or liquified petroleum gas or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) British thermal units per hour, and fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) British thermal units per hour and firing fuel containing less than five-tenths (0.5) percent sulfur by weight, including, but not limited to, the following (all boilers are specified):
  - (1) Twenty-nine (29) boilers and seven (7) water heaters, constructed in 2000, consisting of the following: [326 IAC 6-2-4]

- (A) One (1) natural gas fired boiler, identified as Boiler 100, located in Building 100, maximum capacity: 0.650 million British thermal units per hour.
- (B) One (1) natural gas fired boiler, identified as Boiler 209A, located in Building 209, maximum capacity: 3.0 million British thermal units per hour.
- (C) One (1) natural gas fired boiler and one (1) water heater, located in Building 325, maximum capacity: 1.05 million British thermal units per hour, total.
- (D) One (1) natural gas fired boiler and one (1) water heater, located in Building 327, maximum capacity: 2.0 million British thermal units per hour, total.
- (E) One (1) natural gas fired boiler and one (1) water heater, located in Building 328, maximum capacity: 2.0 million British thermal units per hour, total.
- (F) One (1) natural gas fired boiler and one (1) water heater, located in Building 329, maximum capacity: 2.0 million British thermal units per hour, total.
- (G) One (1) natural gas fired boiler, identified as Boiler 330, located in Building 330, maximum capacity: 0.850 million British thermal units per hour.
- (H) One (1) natural gas fired boiler and one (1) water heater, located in Building 331, maximum capacity: 2.0 million British thermal units per hour.
- (I) One (1) natural gas fired boiler and one (1) water heater, located in Building 332, maximum capacity: 2.0 million British thermal units per hour, total.
- (J) One (1) natural gas fired boiler and one (1) water heater, located in Building 333, maximum capacity: 2.0 million British thermal units per hour, total.
- (K) Four (4) natural gas fired boilers, located in Building 426, maximum capacity: 0.35 million British thermal units per hour.
- (L) One (1) natural gas fired boiler, identified as Boiler 427, located in Building 427, maximum capacity: 0.9 million British thermal units per hour.
- (M) One (1) natural gas fired boiler, identified as Boiler 430, located in Building 430, maximum capacity: 0.450 million British thermal units per hour.
- (N) One (1) natural gas fired boiler, identified as Boiler 435, located in Building 435, maximum capacity: 0.85 million British thermal units per hour.
- (O) One (1) natural gas fired boiler, identified as Boiler 431, located in Building 431, maximum capacity: 0.450 million British thermal units per hour.
- (P) One (1) natural gas fired boiler, identified as Boiler 448, located in Building 448, maximum capacity: 0.650 million British thermal units per hour.
- (Q) One (1) natural gas fired boiler, identified as Boiler 453, located in Building 453, maximum capacity: 0.105 million British thermal units per hour.

- (R) One (1) natural gas fired boiler, identified as Boiler 596A, located in Building 596, maximum capacity: 1.20 million British thermal units per hour.
  - (S) One (1) natural gas fired boiler, identified as Boiler 596B, located in Building 596, maximum capacity: 0.040 million British thermal units per hour.
  - (T) One (1) natural gas fired boiler, identified as Boiler 663, located in Building 663, maximum capacity: 1.8 million British thermal units per hour.
  - (U) One (1) natural gas fired boiler, identified as Boiler 667, located in Building 667, maximum capacity: 0.6 million British thermal units per hour.
  - (V) One (1) natural gas fired boiler, identified as Boiler 668a, located in Building 668, maximum capacity: 0.450 million British thermal units per hour.
  - (W) One (1) natural gas fired boiler, identified as Boiler 670, located in Building 670, maximum capacity: 0.65 million British thermal units per hour.
  - (X) Three (3) natural gas fired boilers, located in Building 671, maximum capacity: 0.66 million British thermal units per hour, total.
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- (2) One (1) natural gas fired boiler, identified as 668b, constructed in February 2001, maximum capacity: 0.45 million British thermal units per hour. [326 IAC 6-2-4]
  - (3) One (1) natural gas and propane fired boiler, identified as 233, constructed in 1999, maximum capacity: 0.45 million British thermal units per hour. [326 IAC 6-2-4]
  - (4) One (1) natural gas and No. 2 fuel oil fired boiler, identified as 440, constructed in 1992, maximum capacity: 0.151 million British thermal units per hour. [326 IAC 6-2-4]
  - (5) One (1) No. 2 fuel oil fired boiler, identified as 591b, constructed in 1992, maximum capacity: 0.25 million British thermal units per hour. [326 IAC 6-2-4]
  - (6) One (1) natural gas fired boiler, identified as 563a, constructed in 1991, maximum capacity: 0.40 million British thermal units per hour. [326 IAC 6-2-4]
  - (7) One (1) natural gas fired boiler, identified as 563b, constructed in 1979, maximum capacity: 0.08 million British thermal units per hour. [326 IAC 6-2-3]
  - (8) One (1) natural gas fired boiler, identified as 593a, constructed in 1992, maximum capacity: 0.40 million British thermal units per hour. [326 IAC 6-2-4]
  - (9) One (1) natural gas fired boiler, identified as 593b, constructed in 1989, maximum capacity: 0.40 million British thermal units per hour. [326 IAC 6-2-4]
  - (10) One (1) natural gas and No. 2 fuel oil fired boiler, identified as 595, constructed in 1988, maximum capacity: 0.40 million British thermal units per hour. [326 IAC 6-2-4]
  - (11) One (1) natural gas or No. 2 fuel oil fired boiler, identified as 597, constructed in 1985, maximum capacity: 1.611 million British thermal units per hour. [326 IAC 6-2-4]
  - (12) One (1) natural gas or propane fired boiler, identified as 600b, constructed in 1992, maximum capacity: 1.50 million British thermal units per hour. [326 IAC 6-2-4]



- (13) One (1) No. 2 fuel oil fired boiler/ hot water heater, identified as 600c, constructed in 1992, maximum capacity: 0.40 million British thermal units per hour. [326 IAC 6-2-4]
- (14) One (1) natural gas or propane fired boiler, identified as 669, constructed in 1998, maximum capacity: 0.90 million British thermal units per hour. [326 IAC 6-2-4]
- (15) One (1) natural gas or propane fired boiler, identified as 683, constructed in 1993, maximum capacity: 0.40 million British thermal units per hour. [326 IAC 6-2-4]
- (16) One (1) natural gas or propane fired boiler, identified as 687, constructed in 1997, maximum capacity: 1.703 million British thermal units per hour. [326 IAC 6-2-4]
- (17) One (1) propane fired boiler, identified as 715, constructed in 1993, maximum capacity: 0.08 million British thermal units per hour. [326 IAC 6-2-4]
- (18) One-hundred and ten (110) natural gas fired infrared heaters, maximum capacity: 20.70 million British thermal units per hour, total.
- (b) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6. Several cold cleaner degreasing units using only non-halogenated solvents. [326 IAC 8-3-2][326 IAC 8-3-5]
- (c) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment. [326 IAC 6-3]
- (d) Grinding and machining operations controller with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations. [326 IAC 6-3]
- (e) Activities or categories of activities with HAP emissions greater than 1 pound per day but less than 12.5 pounds per day or 2.5 tons per year of any combination of HAPs:
  - (1) Installation of compass and global positioning equipment and replacing radar equipment on Air Force planes in Nose Dock 2 (including painting operations). [326 IAC 6-3]
  - (2) Fuel cell repair
  - (3) JP-8 fuel handling
  - (4) Low point draw box remediation
- (f) The following activities or categories with emissions below insignificant thresholds:
  - (1) Four (4) media blasters, equipped with 99% efficient bag filters, operating an average of three (3) hours per day. [326 IAC 6-3]
  - (2) One (1) firing range bullet trap equipped with dust collector. [326 IAC 6-3]

- (3) One (1) No. 2 fuel oil tank, identified as 600, installed in 1986, capacity: 12,000 gallons. [326 IAC 12][40 CFR 60.116b]
  - (4) One (1) No. 2 fuel oil underground tank, identified as 592A, installed in 1998, capacity: 15,000 gallons. [326 IAC 12][40 CFR 60.116b]
  - (5) Two (2) propylene glycol above ground storage tanks, identified as 381 and 382, constructed in 1991, capacity: 25,000 gallons, each. [326 IAC 12][40 CFR 60.116b]
  - (6) One (1) fuel oil tank, identified as 235, installed in 1976, capacity: 420,000 gallons.
  - (7) One (1) diesel tank, identified as 380, installed in 1991, capacity: 10,000 gallons.
  - (8) One (1) diesel tank, identified as 447, installed in 1995, capacity: 10,000 gallons.
  - (9) One (1) diesel aboveground storage tank, identified as 593B, installed in 2001, capacity: 2,000 gallons.
  - (10) One (1) JP-8 aboveground storage tank, identified as 593A, installed in 2001, capacity: 2,000 gallons.
  - (11) Two (2) No. 2 fuel oil underground storage tanks, identified as 595 and 597, installed in 1993 and 1985, capacity: 4,000 gallons, each.
  - (12) One (1) diesel underground storage tank, identified as 419C, installed in 1987, capacity: 10,000 gallons.
  - (13) One (1) No. 2 fuel oil underground storage tank, identified as 591A, installed in 1998, capacity: 5,000 gallons.
  - (14) Two (2) fuel oil above ground storage tanks, identified as 683 and 440, capacity: less than 1,000 gallons.
  - (15) One (1) propane storage tank, capacity: 10,000 gallons.
  - (16) One (1) propane storage tank, capacity: 4,000 gallons.
  - (17) Several propane tanks equal or less than 1,000 gallons.
  - (18) Twenty-two (22) diesel above ground storage tanks, capacity: less than 1,000 gallons.
  - (19) One (1) JP-8 above ground storage tank, identified as 404, constructed in 1995, capacity: 500 gallons.
  - (20) One (1) used oil storage tank, identified as 420, constructed in 1993, capacity: 300 gallons.
  - (21) One (1) underground diesel storage tank, identified as 663, capacity: 1,000 gallons.
- (g) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 British thermal units per hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 British thermal units per hour.

- (h) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons, consisting of two (2) gasoline underground storage tanks, identified as 419A and 419B, capacity: 10,000 gallons, each.
- (i) Petroleum fuel other than gasoline dispensing facility, having a storage tank capacity less than or equal to ten thousand five hundred (10,500) gallons, and dispensing three thousand five hundred (3,500) gallons per day or less.
- (j) VOC and HAP storage tanks with capacities less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.
- (k) Groundwater oil recovery wells.
- (l) Any operation using aqueous solutions containing less than one percent (1%) by weight of VOCs excluding HAPs.
- (m) Stockpiled soils from soil remediation activities that are covered and waiting transport for disposal.
- (n) Paved and unpaved roads and parking lots with public access.
- (o) Asbestos abatement projects regulated by 326 IAC 14-10.
- (p) Purging of gas lines and vessels that is related to routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process.
- (q) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment.
- (r) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (s) On-site fire and emergency response training approved by the department.
- (t) Emergency generators as follows:
  - Gasoline generators not exceeding 110 horsepower.
  - Diesel generators not exceeding 1,600 horsepower.
  - Natural gas turbines or reciprocating engines not exceeding 16,000 horsepower.

### Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

- (a) OP 53-03-83-0079, issued on March 22, 1979;
- (b) Exemption issued on June 16, 1989;
- (c) Registration, issued October 26, 1989;

- (d) OP 53-03-94-0124, issued on July 13, 1990;
- (e) OP 53-03-94-0125, issued July 13, 1990;
- (f) OP 53-03-94-0126, issued July 13, 1990;
- (g) OP 53-03-94-0127, issued July 13, 1990;
- (h) OP 52-03-94-0128, issued on July 13, 1990;
- (i) Registration (ID No. 2720-0008) issued on July 18, 1990;
- (j) Registration (ID No. 103-00008) issued on May 13, 1991;
- (k) Exemption, issued May 15, 1991;
- (l) Amendment to OP 53-03-94-0125 through 0127, issued February 18, 1992;
- (m) CP 103-2636-00008, issued on December 18, 1992;
- (n) Operation Permit Validation letter, issued August 24, 1993;
- (o) Amendment to CP 103-2636-00008, issued May 9, 1995;
- (p) T 103-7426-00008, issued on December 1, 1999;
- (q) First Administrative Amendment, AA 103-11655-00008, issued on December 22, 1999;
- (r) First Significant Source Modification, SSM 103-11789-00008, issued on March 29, 2000;
- (s) Second Administrative Amendment, AA 103-11821-00008, issued on March 29, 2000;
- (t) First Significant Permit Modification SPM 103-12139-00008, issued on June 28, 2000; and
- (u) Third Administrative Amendment AA 103-12594-00008, issued on October 6, 2000.

All conditions from previous approvals that have not previously been superceded, modified, or replaced in another permit or permit amendment were incorporated into this FESOP except the following:

- (a) CP 103-2636-00008, issued on December 18, 1992

Operation Condition 4:

That the amount of natural gas usage for the boilers (No. 3, 4 and 5) shall be limited to 1324.2 million cubic feet per year, based on a twelve month average rolled on a monthly basis. During the first 12 months of operation, natural usage shall be limited such that total natural gas usage divided by the months of operation shall not exceed 110.35 million cubic feet per year.

And

Operation Condition 5:

That the amount of # 2 fuel oil usage for the boilers (#3, 4, and 5) shall be limited to 4,660,062 gallons per year, based on a twelve month average rolled on a monthly basis. During the first 12 months of operation, fuel oil usage shall be limited such that total fuel oil usage divided by the months of operation shall not exceed 388,338.5 gallons per month. For each gallon of fuel used, the natural gas usage shall be reduced by 142.8 cubic feet. Therefore, this conditions and condition Nos. 4, 6, and 7 will make the Prevention of Significant Deterioration (PSD) rules, 326 IAC 2-2 and 40 CFR 52.21 not applicable.

Reasons not incorporated:

Boilers BOI3, BOI4 and BOI5 have been removed from this source.

(b) T 103-7426-00008, issued on December 1, 1999

All conditions in Section D.1 (D.1.1 through D.1.9).

Reasons not incorporated:

The five (5) boilers (BOI1, BOI2, BOI3, BOI4, and BOI5) have been removed from this source.

**Enforcement Issue**

There are no enforcement actions pending.

**Recommendation**

The staff recommends to the Commissioner that the FESOP be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively complete FESOP application for the purposes of this review was received on February 7, 2001. Additional information was received on March 13, 2001.

There was no notice of completeness letter mailed to the source.

**Emission Calculations**

See pages 1 through 9 of 9 of Appendix A of this document for detailed emissions calculations.

**Potential To Emit**

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

The table reflects the PTE after all FESOP limitations, which were also included in the Title V.

<b>Pollutant</b>	<b>Potential To Emit (tons/year)</b>
PM	84.0
PM <sub>10</sub>	89.2
SO <sub>2</sub>	38.2
VOC	less than 96.0
CO	36.3
NO <sub>x</sub>	72.6

Note: For the purpose of determining Title V applicability for particulates, PM<sub>10</sub>, not PM, is the regulated pollutant in consideration.

<b>HAP's</b>	<b>Potential To Emit (tons/year)</b>
Benzene	less than 10
Dichlorobenzene	less than 10
Formaldehyde	less than 10
Hexane	less than 10
Toluene	less than 10
Lead	less than 10
Cadmium	less than 10
Chromium	less than 10
Manganese	less than 10
Nickel	less than 10
Arsenic	less than 10
Beryllium	less than 10
Mercury	less than 10
Selenium	less than 10
Xylenes	less than 10
Methyl isobutyl ketone	less than 10
Methyl ethyl ketone	less than 10
Glycol Ethers	less than 10
Ethyl benzene	less than 10
<b>TOTAL</b>	less than 25

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of VOC is less than one hundred (100) tons per year after federally enforceable controls and limitations.
- (b) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is less ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination HAPs is less than twenty-five (25) tons per year after federally enforceable limitations.
- (c) This source, otherwise required to obtain a Title V permit, has agreed to accept a permit with federally enforceable limits that restrict its PTE to below the Title V emission levels. Therefore, this source will be issued a Federally Enforceable State Operating Permit (FESOP), pursuant to 326 IAC 2-8.

### Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 1998 OAQ emission data.

Pollutant	Actual Emissions (tons/year)
PM	17.9
PM <sub>10</sub>	20.7
SO <sub>2</sub>	17.9
VOC	29.0
CO	9.67
NO <sub>x</sub>	17.5
HAP (Acetaldehyde)	0.002
HAP (Acrolein)	0.0002
HAP (Benzene)	0.009
HAP (1,3 Butadiene)	0.0001
HAP (Ethylbenzene)	0.002
HAP (Ethylene Glycol)	0.626
HAP (Formaldehyde)	0.007
HAP (Hexane)	0.012
HAP (Methanol)	0.114
HAP (MEK)	0.201
HAP (MIBK)	0.00005
HAP (Methylene Chloride)	0.011
HAP (Naphthalene)	0.032
HAP (Toluene)	3.45
HAP (2,2,4 - Trimethylpentane)	0.002
HAP (Xylenes)	0.034

## Potential to Emit

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls.

	Limited Potential to Emit (tons/year)						
Process/facility	PM	PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPS
One (1) spray paint room in bldg. 453	17.9	33.5	0.00	less than 25.0	0.00	0.00	less than 9.0 individual; 17.6 total
Airplane Interior Paint Operations	less than 25		0.00	less than 2.74	0.00	0.00	
Airplane Exterior Paint Operations	less than 25		0.00	less than 25	0.00	0.00	
One (1) grit blast room	9.45	47.0	0.00	0.00	0.00	0.00	Negligible
One (1) bulk POL system	0.00	0.00	0.00	less than 25	0.00	0.00	Negligible
One (1) boiler, fired by natural gas or No. 2 fuel oil (B592)	0.394	0.394	14.0	0.121	1.85	3.94	0.041
One (1) boiler, fired by natural gas, No. 2 fuel oil or propane (600a)	0.131	0.131	4.66	0.049	0.745	1.36	0.017
One (1) boiler, fired by natural gas or No. 2 fuel oil (591a)	0.128	0.128	4.55	0.049	0.754	1.28	0.017
Insignificant Activities	6.00	8.00	15.0	18.0	33.0	66.0	4.0 total
Total Emissions	less than 84.0	89.2	38.2	less than 96.0	36.3	72.6	less than 10 individual; less than 25 total

- (a) The VOC emissions from the one (1) spray paint room in building 453 are limited to make the requirements of 326 IAC 8-2-9 not applicable.
- (b) The PM<sub>10</sub> emissions from the one (1) spray paint booth located in building 453, the interior parts paint area, the exterior parts paint area are limited to the total potential to emit to ensure that 326 IAC 2-7, Part 70, is not applicable.
- (c) The PM from the interior parts paint area and the exterior parts paint area cannot increase to twenty-five (25) tons per year or more in order for those modifications to be minor modifications to an existing major source and make 326 IAC 2-2, PSD, not applicable. Although the source currently will not emit any pollutant at or above major source levels pursuant to 326 IAC 2-2, PSD, the source previously emitted SO<sub>2</sub> at or above major source levels. Therefore, this source will always be considered a major source pursuant to 326 IAC 2-2, PSD.
- (d) The PM emissions from the one (1) grit blast room are limited by the requirements of 326 IAC 6-3-2. The value in the table is the annual equivalent of operating at the allowable



emissions rate for 8,760 hours per year. This is the allowable annual emissions included in the FESOP.

- (e) The VOC emissions from the airplane interior paint operations are limited to less than fifteen (15) pounds per hour, equivalent to 2.74 tons per year, make the requirements of 326 IAC 8-2-9 not applicable.
- (f) The VOC from the airplane exterior paint area and the bulk POL system cannot increase to twenty-five (25) tons per year or more in order for 326 IAC 8-1-6 to remain not applicable.
- (d) The HAP emissions are limited to less than ten (10) tons per year of each individual HAP and less than twenty-five (25) tons per year of any combination of HAPs to make the requirements of 40 CFR 63, Subpart GG not applicable and to allow this source to obtain a FESOP pursuant to 326 IAC 2-8.
- (e) The emissions from insignificant activities were provided by the applicant and have been determined to be conservative.

All limitations are explained in the Federal Rule Applicability and State Rule Applicability sections of this document.

### County Attainment Status

The source is located in Miami County.

Pollutant	Status
PM <sub>10</sub>	Attainment
SO <sub>2</sub>	Attainment
NO <sub>2</sub>	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO<sub>x</sub>) are precursors for the formation of ozone. Therefore, VOC and NO<sub>x</sub> emissions are considered when evaluating the rule applicability relating to the ozone standards. Miami County has been designated as attainment or unclassifiable for ozone.
- (b) Miami County has been classified as attainment or unclassifiable for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

### Federal Rule Applicability

The applicability of federal rules has not changed from the issuance of the Title V Operating Permit (T103-7426-00008) on December 1, 1999. The applicability is evaluated as follows:

- (a) The boilers are not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.40c, Subpart Dc), because they each have a capacity less than ten (10) million British thermal units per hour.

- (b) This source is not subject to the requirements of 326 IAC 12, 40 CFR 60.500, Subpart XX, because this source is not a bulk gasoline terminal, which is defined by this subpart as a gasoline facility which receives gasoline by pipeline, ship or barge, and has a gasoline throughput greater than 75,700 liters per day.
- (c) The six (6) horizontal underground JP-8 storage tanks identified as 736-1, 736-2, 726-3, 736-4, 736-5 and 736-6, four (4) vertical above ground JP-8 storage tanks identified as 400, 401, 402, 403 and the one (1) JP-8 tank identified as 406, are not subject to the requirements of 326 IAC 12, 40 CFR 60.110, 60.110a and 60.110b, Subparts K, Ka and Kb, because they were constructed prior to June 11, 1973.
- (d) The two (2) horizontal above ground storage tanks, known as 383 and 384, installed in 1991 which are part of the bulk POL system and store propylene glycol, and the two (2) insignificant propylene glycol storage tanks, known as 381 and 382, constructed in 1995, each have capacities more than 75 cubic meters and less than 151 cubic meters and store liquid with a maximum true vapor pressure less than 15 kilopascals. Therefore, the tanks are exempt from the general provisions of 40 CFR Part 60 and the provisions of Subpart Kb except as specified in paragraphs (a) and (b) of 40 CFR 60.116b, which require record keeping.
- (e) The two (2) No. 2 fuel oil tanks, identified as 600 and 592A, installed after July 23, 1984 with capacities more than 40 cubic meters and less than 75 cubic meters are exempt from the general provisions of 40 CFR Part 60 and the provisions of Subpart Kb except as specified in paragraphs (a) and (b) of 40 CFR 60.116b, which require record keeping.
- (f) The two (2) diesel tanks, identified as 380 and 447, one (1) diesel storage tank, identified as 419C, and two (2) gasoline storage tanks, identified as 419A and 419B, which are part of the gasoline fuel transfer operation, each with a capacity of 10,000 gallons, constructed after July 23, 1984, are not subject to the requirements of 326 IAC 12, 40 CFR 60.110b, Subpart Kb, because they each have a capacity less than 40 cubic meters. The propane storage tanks and twenty-two (22) diesel storage tanks also have capacities less than 40 cubic meters, and are not subject to the requirements of 326 IAC 12, 40 CFR 60.110b, Subpart Kb.
- (g) The two (2) diesel tanks, identified as 593B and 663, two (2) JP-8 tanks, identified as 593A and 404, two (2) No. 2 fuel oil tanks, identified as 595 and 597, one (1) No. 2 fuel oil tank, identified as 591A, two (2) fuel oil tanks, identified as 683 and 440, and one (1) used oil storage tank, identified as 420, all constructed after July 23, 1984, are not subject to the requirements of 326 IAC 12, 40 CFR 60.110b, Subpart Kb, because they each have a capacity less than 40 cubic meters.
- (h) The one (1) fuel oil storage tank, constructed in 1976, with a capacity of 420,000 gallons, is not subject to the requirements of 40 CFR 60.110, Subpart K, Standards of Performance for Storage Vessels for which Construction, Reconstruction, or Modification Commenced after June 11, 1973 and prior to May 19, 1978, because, pursuant to 40 CFR 60.111, petroleum liquids do not include No. 2 through No. 6 fuel oils or diesel fuel oils Nos. 2-D and 4-D, which would be the only liquids stored in this tanks. The requirements of 40 CFR 60.110a and 60.110b, Subparts Ka and Kb, because the tank was constructed prior to May 18, 1978.
- (i) This source is not subject to the requirements of 326 IAC 20, 40 CFR 63.420, Subpart R, because this source is not a bulk gasoline terminal, which is defined by this subpart as a gasoline facility which receives gasoline by pipeline, ship or barge, and has a gasoline

throughput greater than 75,700 liters per day.

- (j) The requirements of 40 CFR Part 63, Subpart T, National Emission Standards for Halogenated Solvent Cleaning, are not applicable because the cold cleaning degreasing units use only non-halogenated solvents.
- (k) The requirements of 40 CFR Part 63, Subpart GG, National Emission Standards for Aerospace Manufacturing and Rework Facilities, is not applicable to this source because the source has agreed to limit hazardous air pollutant emissions to less than ten (10) tons per year of each individual HAP and less than twenty-five (25) tons per year of total HAPs. This limitation will make the source a minor source of HAPs and not a major source as defined in 40 CFR 63.2.
  - (1) Pursuant to T 103-7426-00008, issued on December 1, 1999, the total HAP usage at the one (1) spray paint room in building 453, airplane exterior paint area, and the interior parts paint area will be limited to a combined total of 17.6 tons of hazardous air pollutants per year. Therefore the potential to emit any combination of HAPs from the entire source will be less than twenty-five (25) tons per year (17.6 tons per year from these three (3) facilities + 4.06 tons per year from all other facilities =  $21.7 < 25$ ).
  - (2) Pursuant to T 103-7426-00008, issued on December 1, 1999, the total usage of MIBK at the one (1) spray paint room in building 453, the airplane exterior paint area, and the interior parts paint area will be limited to less than 8.92 tons per year (less than 8.92 tons per year from these three (3) facilities + 1.08 tons per year from insignificant painting < 10 tons per year) and the total usage of Hexane at the one (1) spray paint room in building 453, the airplane exterior paint area, and the interior parts paint area will be limited to less than 7.75 tons per year (7.75 tons per year + 0.434 tons per year from boilers = 8.18 tons per year < 10 tons per year). The limited potential to emit of each other individual HAP at all other facilities is less than 1 ton per year.
- (l) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs), 326 IAC 14 and 326 IAC 20, 40 CFR Part 61 and 40 CFR Part 63, applicable to this source.

#### **State Rule Applicability - Entire Source**

##### **326 IAC 2-4.1-1 (New Source Toxics Control)**

Pursuant to T 103-7426-00008, issued on December 1, 1999, the potential to emit each individual HAP is limited to less than ten (10) tons per year and the potential to emit any combination of HAPs is limited to less than twenty-five (25) tons per year to make 40 CFR Part 63, Subpart GG not applicable. Therefore, the requirements of 326 IAC 2-4.1-1, New Source Toxics Control, are also not applicable.

##### **326 IAC 2-6 (Emission Reporting)**

This source is located in Miami County and the potentials to emit  $\text{NO}_x$  and  $\text{SO}_2$  are now less than one hundred (100) tons per year, due to the removal of five (5) boilers previously located at this source. Therefore, 326 IAC 2-6 does not apply.

### 326 IAC 2-8-4 (FESOP)

Pursuant to this rule, the amount of PM<sub>10</sub>, SO<sub>2</sub>, VOC, CO and NO<sub>x</sub> shall be limited to less than one hundred (100) tons per year. In addition, the amount of a single HAP shall be limited to less than ten (10) tons per year and the combination of all HAPs shall be limited to less than twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 2-7, do not apply.

### 326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity limitations), except as provided in 326 IAC 5-1-3 (Temporary alternative opacity limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR Part 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

### State Rule Applicability - Individual Facilities

#### 326 IAC 6-2-3 (Particulate Emissions Limitations for Sources of Indirect Heating)

The one (1) insignificant boiler, known as 563b, constructed in 1979, with a total heat input capacity of 0.08 million British thermal units per hour, must comply with the PM emission limitation of 326 IAC 6-2-3. This limitation is based on the following equation is given in 326 IAC 6-2-3:

$$Pt = C \times a \times h / 76.5 \times Q^{0.75} \times N^{0.25}$$

where:

Pt = Pounds of particulate matter emitted per million British thermal units (lb/MMBtu) heat input

Q = Total source maximum operating capacity rating in million British thermal units per hour (MMBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

C = Maximum ground level concentration with respect to distance from the point source at the "critical" wind speed for level terrain. This shall equal 50 micrograms per cubic meter for a period not to exceed a sixty (60) minute time period.

N = Number of stacks in fuel burning operation.

a = Plume rise factor which is used to make allowance for less than theoretical plume rise. The value 0.67 shall be used for Q less than or equal to 1,000 mmBtu/hr heat input. The value 0.8 shall be used for Q greater than 1,000 mmBtu/hr heat input.

h = Stack height in feet.

At the time the boiler was constructed, there were five (5) boilers in existence at this source that have since been removed. The total capacity of those five (5) boilers was 280.9 million British thermal units. Therefore, for the one (1) insignificant boiler, known as 563b, constructed in 1979:

$$Pt = 50 \times 0.67 \times 20 / 76.5 \times (280.98)^{0.75} \times 1^{0.25} = 0.13 \text{ lb/MMBtu}$$

The potential to emit PM emissions from the one (1) natural gas-fired boiler limited to 0.13 pound PM per million British thermal units is:

$$0.08 \text{ MMBtu/hr} \times 1 \text{ mmcf} / 1,000 \text{ MMBtu} \times 1.9 \text{ lb/mmcf} = 0.0002 \text{ lbs/hr}$$

$$(0.0002 \text{ lbs/hr} / 0.08 \text{ MMBtu/hr}) = 0.002 \text{ lbs PM per MMBtu}$$

Therefore, the one (1) insignificant boiler, identified as 563b, will comply with this rule.

#### 326 IAC 6-2-4 (Particulate Emissions Limitations for Sources of Indirect Heating)

All other boilers at this source were constructed after September 21, 1983 and will be subject to the requirements of 326 IAC 6-2-4. As shown in the table, below, all of the boilers at this source will comply with the requirements of this rule. The PM from the boilers will be limited according to the following equation:

$$Pt = 1.09/Q^{0.26}$$

where:

Pt = Pounds of particulate matter emitted per million British thermal units (lb/MMBtu) heat input

Q = Total source maximum operating capacity rating in million British thermal units per hour (MMBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

Year Constructed	Boilers Constructed	Worst Case Fuel for PM	Maximum Capacity of Boilers Constructed (MMBtu/hr)	Total Source Operating Capacity at the time of construction (MMBtu/hr) (Q)	PM Emission Limitation for each boiler (lbs/MMBtu) (Pt)	PM Potential to Emit based on AP-42 Emission Factors* (lbs/MMBtu)
1985	597	No. 2 fuel oil	1.611	282.591	0.25	0.014
1986	600a	No. 2 fuel oil	2.1	284.691	0.25	0.014
1987	591a	No. 2 fuel oil	2.049	286.74	0.25	0.014

Year Constructed	Boilers Constructed	Worst Case Fuel for PM	Maximum Capacity of Boilers Constructed (MMBtu/hr)	Total Source Operating Capacity at the time of construction (MMBtu/hr) (Q)	PM Emission Limitation for each boiler (lbs/MMBtu) (Pt)	PM Potential to Emit based on AP-42 Emission Factors* (lbs/MMBtu)
1988	595	No. 2 fuel oil	0.40	287.14	0.25	0.014
1989	593b	natural gas	0.40	287.54	0.25	0.0019
1991	563a	natural gas	0.40	287.94	0.25	0.0019
1992	400, 591b, 593a, 600b and 600c	No. 2 fuel oil	2.701	290.641	0.25	0.014
1993	683 and 715	natural gas	0.48	291.121	0.25	0.0019
1997	B592 and 687	No. 2 fuel oil	7.993	299.114	0.25	0.014
1998	669	natural gas	0.90	300.014	0.25	0.0019
1999	233	natural gas	0.45	300.464	0.25	0.0019
2000	Twenty-nine (29) boilers and seven (7) water heaters	natural gas	26.70	327.164	0.24	0.0019
2001	668b	natural gas	0.45	46.714 (the five (5) boilers (BOI1-BOI5 were removed in August, 2000)	0.40	0.0019

\*The potential to emit from each boiler was calculated as follows:

For natural gas:

$$1.9 \text{ lbs/mmcf} \times 1 \text{ mmcf} / 1,000 \text{ MMBtu} = 0.0019 \text{ lb/MMBtu}$$

For No. 2 fuel oil:

$$2.0 \text{ lbs/kgal} \times 1 \text{ kgal} / 140 \text{ MMBtu} = 0.014 \text{ lb/MMBtu}$$

For Propane:  
 $0.4 \text{ lb/kgal} \times 1 \text{ kgal} / 94 \text{ MMBtu} = 0.004 \text{ lb/MMBtu}$

326 IAC 6-3-2 (Process Operations)

- (a) The particulate matter (PM) from the one (1) spray paint booth located in building 453, the interior parts paint area, the exterior parts paint area and the insignificant paint operations shall not exceed 0.551 pounds per hour for process weight rates of less than 100 pounds per hour. For process weights rates of 100 pounds per hour or more, the allowable PM emission rate shall be based on the following formulas:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

or

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

- (b) The particulate matter (PM) from the one (1) grit blast room shall be limited to 2.16 pounds per hour when operating at a grit flow rate of 767 pounds per hour. Since the potential to emit after control by the baghouse is 0.002 tons per year of PM, the one (1) grit blast room will comply with this limit. This limitation was computed using the following equation:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

The one (1) baghouse shall be in operation at all times when the one (1) grit blast room is in operation, in order to comply with this limit.

- (c) Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the grinding and machining operations, four (4) media blasters, one (1) firing range bullet trap, and the brazing, cutting, soldering, and welding shall not exceed 0.551 pounds per hour for process weight rates of less than 100 pounds per hour. For process weights rates of 100 pounds per hour or more, the allowable PM emission rate shall be based on the following equations:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

or

Interpolation and extrapolation of the data for the process weight rate in excess of 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

The bag filters shall be in operation at all times when the four (4) media blasters are in operation, in order to comply with this limit. The dust collector shall be in operation at all times when the one (1) firing range bullet trap was in operation, in order to comply with this limit.

#### 326 IAC 7-1 (Sulfur Dioxide Emission Limitations)

Since the potential to emit SO<sub>2</sub> from each boiler is less than twenty-five (25) tons per year and ten (10) pounds per hour of SO<sub>2</sub>, the requirements of 326 IAC 7-1 are not applicable.

#### 326 IAC 8-2-9 (Miscellaneous Metal Coating)

- (a) Pursuant to 326 IAC 8-2-9(b)(2), the requirements of 326 IAC 8-2-9 do not apply to surface coating of the exterior of airplanes. Therefore, the airplane exterior coating area is not subject to the requirements of 326 IAC 8-2-9.
- (b) Since the one (1) spray paint booth, located in building 453 was constructed in 1989 and potential VOC emissions exceed twenty-five (25) tons per year, the requirements of 326 IAC 8-2-9 can be applicable. Pursuant to T 103-7426-00008, issued on December 1, 1999, the VOC emissions from the one (1) spray paint booth in building 453 shall be limited to less than twenty-five (25) tons per consecutive twelve (12) month period, based on a monthly rolling total. Therefore, the requirements of 326 IAC 8-2-9 are not applicable.
- (c) Since the interior parts painting area began operation in 1996 and potential VOC emissions exceed 15 pounds per day, the requirements of 326 IAC 8-2-9 can be applicable. Pursuant to T 103-7426-00008, issued on December 1, 1999, the VOC emissions shall be limited to less than fifteen (15) pounds per day. Therefore, the requirements of 326 IAC 8-2-9 are not applicable. This limitation will also result in VOC emissions less than twenty-five (25) tons per year from the interior parts painting area.
- (d) Since the potential VOC emissions from the insignificant painting operations in Nose Dock 2, which began operation in 1998, are less than fifteen (15) pounds per day and twenty-five (25) tons per year, the requirements of 326 IAC 8-2-9 are not applicable.

#### 326 IAC 8-1-6 (New Facilities; general reduction requirements)

- (a) Since the airplane exterior painting area and insignificant painting operations in Nose Dock 2 have a potential to emit less than twenty-five (25) tons per year of VOC, each, the requirements of 326 IAC 8-1-6 are not applicable to those operations.
- (b) Since the one (1) bulk POL system has potential VOC emissions less than twenty-five (25) tons per year, the requirements of 326 IAC 8-1-6 are not applicable to that system.
- (c) The VOC emissions from the one (1) spray paint booth located in building 453 will be limited to less than 25 tons per year to render the requirements of 326 IAC 8-2-9 not applicable, and the VOC emissions from the interior parts painting area will be limited to less than fifteen (15) pounds per day which results in is less than twenty-five (25) tons per



year to make the requirements of 326 IAC 8-2-9 not applicable. Therefore, the requirements of 326 IAC 8-1-6 are also not applicable to those operations.

- (d) Since the potential VOC emissions from each boiler are less than twenty-five (25) tons per year, the requirements of 326 IAC 8-1-6 are not applicable.
- (e) Since the potential VOC emissions from each insignificant tank are less than twenty-five (25) tons per year, the requirements of 326 IAC 8-1-6 are not applicable.
- (f) The interior parts paint operations and the airplane exterior paint operations shall not operate at the same nose dock at any time; therefore, the requirements of 326 IAC 8-1-6 and 326 IAC 2-2 are not applicable to the combination of the two (2) operations.

#### 326 IAC 8-3-2 (Organic Solvent Degreasing Operations)

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), the owner or operator of the cold cleaner operations constructed after January 1, 1980 and prior to January 1, 1990 shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

#### 326 IAC 8-3-5 (Organic Solvent Degreasing Operations)

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of cold cleaner degreaser facilities constructed after January 1, 1990 shall ensure that the following control equipment requirements are met:
  - (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
    - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
    - (B) The solvent is agitated; or
    - (C) The solvent is heated.
  - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-

eight degrees Celsius (38°F) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

- (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
- (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
- (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°F) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°F) (one hundred twenty degrees Fahrenheit (120°F)):
  - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
  - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
  - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility shall ensure that the following operating requirements are met:
  - (1) Close the cover whenever articles are not being handled in the degreaser.
  - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
  - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

#### 326 IAC 9-1 (Carbon monoxide emission limits)

Since there is no petroleum refining, ferrous metal smelters and refuse incineration and burning equipment, the requirements of 326 IAC 9-1 do not apply.

#### 326 IAC 10-1 (Nitrogen Oxides Control in Clark and Floyd Counties)

The requirements of 326 IAC 10-1 do not apply to this source, because the source is not located in Clark County or Floyd County.

### Testing Requirements

There are no mandatory testing requirements for this source at the current time.

## Compliance Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

- (a) The one (1) spray paint booth, located in building 453, one (1) interior parts paint area and the one (1) airplane exterior paint area have applicable compliance monitoring conditions as specified below:
  - (1) Weekly observations shall be made of the overspray from the surface coating stacks or emission points while the areas are in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
  - (2) Monthly inspections shall be performed of the coating emissions from the stacks or emission points and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
  - (3) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

These monitoring conditions are necessary because the spray equipment must operate properly to ensure compliance with 326 IAC 6-3 (Process Operations) and 326 IAC 2-8 (FESOP).

- (b) The three (3) significant boilers (B592, 591a and 600a) have applicable compliance monitoring conditions as specified below:

Visible emission notations of each of the boiler stacks exhausts shall be performed once per shift during normal daylight operations when operating on No. 2 fuel oil and exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal. For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

These monitoring conditions are necessary because to ensure compliance with 326 IAC 6-2-4 (Particulate Emissions Limitations for Sources of Indirect Heating) and 326 IAC 2-8 (FESOP).

## **Conclusion**

The operation of this military base shall be subject to the conditions of the attached proposed FESOP No.: F 103-13875-00008.

**Appendix A: Federal Potential Emissions Calculations  
VOC and Particulate  
From Surface Coating Operations**

**Company Name: Grissom Air Reserve Base  
Plant Location: Grissom Air Reserve Base, Grissom, IN 46971-5000  
County: Miami  
FESOP: F 103-13875  
Plt ID: 103-00008  
Permit Reviewer: CarrieAnn Ortolani  
Date: February 7, 2001**

Material	Density (lb/gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Vol (solids)	Gal of Mat (gal/hr)	Flash-off (fraction)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential tons per year	lb VOC /gal solids	Transfer Efficiency
<b>Building 453</b>																
<b>Coating</b>																
Polyurethane Coating C	9.94	39.00%	0.0%	39.0%	0.0%	44.30%	2.00000	1.000	3.88	3.88	7.75	186.08	33.96	13.28	8.75	75%
Epoxy Primer Coating Kit A	11.2	26.89%	0.0%	26.9%	0.0%	54.90%	2.00000	1.000	3.01	3.01	6.02	144.58	26.39	<b>17.93</b>	5.49	75%
Epoxy Primer Coating Kit B	7.71	29.00%	0.0%	29.0%	0.0%	67.90%	2.00000	1.000	2.24	2.24	4.47	107.32	19.59	11.99	3.29	75%
Polyurethane Coating I	8.64	30.34%	0.0%	30.3%	0.0%	65.30%	2.00000	1.000	2.62	2.62	5.24	125.78	22.96	13.18	4.01	75%
Polyurethane Coating J	7.78	52.59%	0.0%	52.6%	0.0%	41.20%	2.00000	1.000	4.09	4.09	<b>8.18</b>	<b>196.29</b>	<b>35.82</b>	8.07	9.93	75%
Enamel Yellow C	8.85	34.92%	0.0%	34.9%	0.0%	57.81%	2.00000	1.000	3.09	3.09	6.18	148.32	27.07	12.61	5.35	75%
<b>Thinner</b>																
Thinner, Dope & Lacquer A	6.67	100.00%	0.0%	100.0%	0.0%	0.00%	2.00000	1.000	6.67	6.67	13.34	320.26	58.45	<b>0.00</b>	n/a	75%
Thinner, Aliphathic Polyurethane A	7.43	100.00%	0.0%	100.0%	0.0%	0.00%	2.00000	1.000	7.43	7.43	<b>14.86</b>	<b>356.69</b>	<b>65.10</b>	0.00	n/a	75%
<b>Nose Dock 1 - Insignificant</b>																
Polyurethane Coating, Black C	10.0	37.84%	0.0%	37.8%	0.0%	47.70%	0.12500	1.000	3.79	3.79	0.47	11.37	2.07	<b>0.00</b>	7.94	100%
Polyurethane Coating, Black D	7.91	29.75%	0.0%	29.8%	0.0%	73.50%	0.12500	1.000	2.35	2.35	0.29	7.06	1.29	0.00	3.20	100%
Polyurethane Coating, Lgt. Gray A	12.1	18.77%	0.0%	18.8%	0.0%	68.90%	0.12500	1.000	2.27	2.27	0.28	6.81	1.24	0.00	3.29	100%
Polyurethane Coating, Lgt. Gray B	7.84	60.00%	0.0%	60.0%	0.0%	32.90%	0.12500	1.000	4.70	4.70	<b>0.59</b>	<b>14.11</b>	<b>2.58</b>	0.00	14.30	100%
Primer Coating C	11.2	26.87%	0.0%	26.9%	0.0%	54.90%	0.12500	1.000	3.01	3.01	0.38	9.04	1.65	0.00	5.49	100%
Primer Coating D	7.76	28.83%	0.0%	28.8%	0.0%	67.60%	0.12500	1.000	2.24	2.24	0.28	6.71	1.22	0.00	3.31	100%
Turcoat Liquid Accelagold B	8.34	98.00%	1.0%	97.0%	1.0%	2.00%	0.00781	1.000	8.17	8.09	0.06	1.52	0.28	0.00	404.49	100%
Thinner, Aliphathic Polyurethane A	7.43	100.00%	0.0%	100.0%	0.0%	0.00%	0.00781	1.000	7.43	7.43	0.06	1.39	0.25	0.00	n/a	100%
<b>Airplane Interior</b>																
<b>Coating</b>																
Polyurethane Coating C	9.94	39.00%	0.0%	39.0%	0.0%	44.30%	1.00000	1.000	3.88	3.88	3.88	93.04	16.98	6.64	8.75	75%
Epoxy Primer Coating Kit A	11.2	26.89%	0.0%	26.9%	0.0%	54.90%	1.00000	1.000	3.01	3.01	3.01	72.29	13.19	<b>8.97</b>	5.49	75%
Epoxy Primer Coating Kit B	7.71	29.00%	0.0%	29.0%	0.0%	67.90%	1.00000	1.000	2.24	2.24	2.24	53.66	9.79	5.99	3.29	75%
Polyurethane Coating I	8.64	30.34%	0.0%	30.3%	0.0%	65.30%	1.00000	1.000	2.62	2.62	2.62	62.89	11.48	6.59	4.01	75%
Polyurethane Coating J	7.78	52.59%	0.0%	52.6%	0.0%	41.20%	1.00000	1.000	4.09	4.09	<b>4.09</b>	<b>98.14</b>	<b>17.91</b>	4.04	9.93	75%
Enamel Yellow C	8.85	34.92%	0.0%	34.9%	0.0%	57.81%	1.00000	1.000	3.09	3.09	3.09	74.16	13.53	6.31	5.35	75%
<b>Thinner</b>																
Thinner, Dope & Lacquer A	6.67	100.00%	0.0%	100.0%	0.0%	0.00%	0.25000	1.000	6.67	6.67	1.67	40.03	7.31	<b>0.00</b>	n/a	75%
Thinner, Aliphathic Polyurethane A	7.43	100.00%	0.0%	100.0%	0.0%	0.00%	0.25000	1.000	7.43	7.43	<b>1.86</b>	<b>44.59</b>	<b>8.14</b>	0.00	n/a	75%
<b>Airplane Exterior</b>																
<b>Coating</b>																
Polyurethane Coating C	9.94	39.00%	0.0%	39.0%	0.0%	44.30%	1.00000	1.000	3.88	3.88	3.88	93.04	16.98	<b>6.64</b>	8.75	75%
Epoxy Primer Coating Kit A	11.2	26.89%	0.0%	26.9%	0.0%	54.90%	0.25000	1.000	3.01	3.01	0.75	18.07	3.30	2.24	5.49	75%
Epoxy Primer Coating Kit B	7.71	29.00%	0.0%	29.0%	0.0%	67.90%	0.25000	1.000	2.24	2.24	0.56	13.42	2.45	1.50	3.29	75%
Polyurethane Coating I	8.64	30.34%	0.0%	30.3%	0.0%	65.30%	1.00000	1.000	2.62	2.62	2.62	62.89	11.48	6.59	4.01	75%
Polyurethane Coating J	7.78	52.59%	0.0%	52.6%	0.0%	41.20%	1.00000	1.000	4.09	4.09	<b>4.09</b>	<b>98.14</b>	<b>17.91</b>	4.04	9.93	75%
Enamel Yellow C	8.85	34.92%	0.0%	34.9%	0.0%	57.81%	1.00000	1.000	3.09	3.09	3.09	74.16	13.53	6.31	5.35	75%
<b>State Potential Emissions</b>											<b>33.7</b>	<b>809</b>	<b>148</b>	<b>33.5</b>		

**Annual Potential Emissions are overestimates because the painting operations in these areas can not operate at full capacity 8,760 hours per year due to space limitations and a primer coating usage constraint for interior coating.**

**METHODOLOGY**

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) \* Weight % Organics) / (1-Volume % water)

Pounds of VOC per Gallon Coating = (Density (lb/gal) \* Weight % Organics)

Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* Flash-off

Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (24 hr/day) \* Flash-off

Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (8760 hr/yr) \* (1 ton/2000 lbs) \* Flash-off

Particulate Potential Tons per Year = (units/hour) \* (gal/unit) \* (lbs/gal) \* (1- Weight % Volatiles) \* (1-Transfer efficiency) \*(8760 hrs/yr) \*(1 ton/2000 lbs)

Pounds VOC per Gallon of Solids = (Density (lbs/gal) \* Weight % organics) / (Volume % solids) \* Flash-off

Total = Worst Coating + Sum of all solvents used

## HAP Emission Calculations

Company Name: Grissom Air Reserve Base  
 Plant Location: Grissom Air Reserve Base, Grissom, IN 46971-5000  
 County: Miami  
 FESOP: F 103-13875  
 Pit ID: 103-00008  
 Permit Reviewer: CarrieAnn Ortolani  
 Date: February 7, 2001

Material	Density (lb/gal)	Gal of Mat (gal/hr)	Weight % Xylene	Weight % Toluene	Weight % MIBK	Weight % Benzene	Weight % MEK	Weight % Glycol Ethers	Weight % Ethyl Benzene	Weight % Hexane	Weight % Chromium	Xylene Emissions (tons/yr)	Toluene Emissions (tons/yr)	MIBK Emissions (tons/yr)	Benzene Emissions (tons/yr)	MEK Emissions (tons/yr)	Glycol Ethers Emissions (tons/yr)	Ethyl Benzene Emissions (tons/yr)	Hexane Emissions (tons/yr)	Chromium Emissions (tons/yr)	Total Emissions (tons/yr)
<b>Building 453</b>																					
Polyurethane Coating C	9.94	2.00000	1.00%	1.00%	20.00%	0.00%	10.00%	0.00%	1.00%	0.00%	0.00%	0.87	0.87	17.41	0.00	8.71	0.00	0.87	0.00	0.00	28.73
Epoxy Primer Coating Kit A	11.2	2.00000	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.98	0.00	0.00	0.00	0.00	0.00	0.98	0.00	0.00	1.96
Epoxy Primer Coating Kit B	7.71	2.00000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Polyurethane Coating I	8.64	2.00000	1.00%	1.00%	0.00%	0.00%	0.00%	5.00%	0.10%	0.00%	0.00%	0.76	0.76	0.00	0.00	0.00	3.78	0.08	0.00	0.00	5.37
Polyurethane Coating J	7.78	2.00000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enamel Yellow C	8.85	2.00000	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.55
<b>Thinner</b>																					
Thinner, Dope & Lacquer A	6.67	2.00000	0.00%	15.00%	0.00%	0.00%	10.00%	0.00%	0.00%	1.00%	0.00%	0.00	8.77	0.00	0.00	5.84	0.00	0.00	0.58	0.00	15.20
Thinner, Aliphathic Polyurethane	7.43	2.00000	6.00%	12.00%	0.00%	0.00%	30.00%	40.00%	2.00%	0.00%	0.00%	3.91	7.81	0.00	0.00	19.53	26.04	1.30	0.00	0.00	58.59
<b>Nose Dock 1</b>																					
Polyurethane Coating, Black C	10.0	0.12500	0.05%	0.64%	19.71%	0.00%	4.22%	0.00%	0.02%	0.00%	0.00%	0.00	0.04	1.08	0.00	0.23	0.00	0.00	0.00	0.00	1.35
Polyurethane Coating, Black D	7.91	0.12500	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Polyurethane Coating, Lgt. Gray	12.1	0.12500	1.00%	1.00%	0.00%	0.00%	5.00%	0.00%	0.10%	0.00%	0.00%	0.07	0.07	0.00	0.00	0.33	0.00	0.01	0.00	0.00	0.47
Polyurethane Coating, Lgt. Gray	7.84	0.12500	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Primer Coating C	11.2	0.12500	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Primer Coating D	7.76	0.12500	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Turcoat Liquid Accelagold B	8.34	0.00781	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
Thinner, Aliphathic Polyurethane	7.43	0.00781	6.00%	12.00%	0.00%	30.00%	0.00%	40.00%	2.00%	0.00%	0.00%	0.02	0.03	0.00	0.08	0.00	0.10	0.01	0.00	0.00	0.23
<b>Airplane Interior Coating</b>																					
Polyurethane Coating C	9.94	1.00000	1.00%	1.00%	20.00%	0.00%	10.00%	0.00%	1.00%	0.00%	0.00%	0.44	0.44	8.71	0.00	4.35	0.00	0.44	0.00	0.00	14.37
Epoxy Primer Coating Kit A	11.2	1.00000	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.49	0.00	0.00	0.00	0.00	0.00	0.49	0.00	0.00	0.98
Epoxy Primer Coating Kit B	7.71	1.00000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Polyurethane Coating I	8.64	1.00000	1.00%	1.00%	0.00%	0.00%	0.00%	5.00%	0.10%	0.00%	0.00%	0.38	0.38	0.00	0.00	0.00	1.89	0.04	0.00	0.00	2.69
Polyurethane Coating J	7.78	1.00000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enamel Yellow C	8.85	1.00000	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.78
<b>Thinner</b>																					
Thinner, Dope & Lacquer A	6.67	0.25000	0.00%	15.00%	0.00%	0.00%	10.00%	0.00%	0.00%	1.00%	0.00%	0.00	1.10	0.00	0.00	0.73	0.00	0.00	0.07	0.00	1.90
Thinner, Aliphathic Polyurethane	7.43	0.25000	6.00%	12.00%	0.00%	0.00%	30.00%	40.00%	2.00%	0.00%	0.00%	0.49	0.98	0.00	0.00	2.44	3.25	0.16	0.00	0.00	7.32
<b>Airplane Exterior Coating</b>																					
Polyurethane Coating C	9.94	1.00000	1.00%	1.00%	20.00%	0.00%	10.00%	0.00%	1.00%	0.00%	0.00%	0.44	0.44	8.71	0.00	4.35	0.00	0.44	0.00	0.00	14.37
Epoxy Primer Coating Kit A	11.2	0.25000	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.12	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.25
Epoxy Primer Coating Kit B	7.71	0.25000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Polyurethane Coating I	8.64	1.00000	1.00%	1.00%	0.00%	0.00%	0.00%	5.00%	0.10%	0.00%	0.00%	0.38	0.38	0.00	0.00	0.00	1.89	0.04	0.00	0.00	2.69
Polyurethane Coating J	7.78	1.00000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enamel Yellow C	8.85	1.00000	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.78
<b>TOTALS:</b>											<b>(tons/yr):</b>	7.58	11.7	35.9	0.076	39.7	37.0	3.38	0.658	0.014	125

**Appendix A: Emission Calculations**  
**Abrasive Blasting - Confined**

Page 3 of 9 TSD App A

**Company Name:** Grissom Air Reserve Base  
**Plant Location:** Grissom Air Reserve Base, Grissom, IN 46971-5000  
**County:** Miami  
**FESOP:** F 103-13875  
**Plt ID:** 103-00008  
**Permit Reviewer:** CarrieAnn Ortolani  
**Date:** February 7, 2001

**Table 1 - Emission Factors for Abrasives**

Abrasive	Emission Factor	
	lb PM / lb abrasive	lb PM10 / lb PM
Sand	0.041	0.70
Grit	0.010	0.70
Steel Shot	0.004	0.86
Other	0.010	

**Table 2 - Density of Abrasives (lb/ft3)**

Abrasive	Density (lb/ft3)
Al oxides	160
Sand	99
Steel	487

**Table 3 - Sand Flow Rate (FR1) Through Nozzle (lb/hr)**

Flow rate of Sand Through a Blasting Nozzle as a Function of Nozzle pressure and Internal Diameter

Internal diameter, in	Nozzle Pressure (psig)							
	30	40	50	60	70	80	90	100
1/8	28	35	42	49	55	63	70	77
3/16	65	80	94	107	122	135	149	165
1/4	109	138	168	195	221	255	280	309
5/16	205	247	292	354	377	420	462	507
3/8	285	355	417	477	540	600	657	720
7/16	385	472	560	645	755	820	905	940
1/2	503	615	725	835	945	1050	1160	1265
5/8	820	990	1170	1336	1510	1680	1850	2030
3/4	1140	1420	1670	1915	2160	2400	2630	2880
1	2030	2460	2900	3340	3780	4200	4640	5060

**Calculations**

*Adjusting Flow Rates for Different Abrasives and Nozzle Diameters*

Flow Rate (FR) = Abrasive flow rate (lb/hr) with internal nozzle diameter (ID)  
FR1 = Sand flow rate (lb/hr) with internal nozzle diameter (ID1) From Table 3 =  
D = Density of abrasive (lb/ft3) From Table 2 =  
D1 = Density of sand (lb/ft3) =  
ID = Actual nozzle internal diameter (in) =  
ID1 = Nozzle internal diameter (in) from Table 3 =

1265
60
99
0.5
0.5

**Flow Rate (FR) (lb/hr) = 767 per nozzle**

**Uncontrolled Emissions (E, lb/hr)**

EF = emission factor (lb PM/ lb abrasive) From Table 1 =  
FR = Flow Rate (lb/hr) =  
w = fraction of time of wet blasting =  
N = number of nozzles =

0.010
767
0
2

	PM	PM-10
<b>Uncontrolled Emissions =</b>	<b>15.3 lbs/hr</b>	<b>10.7 lbs/hr</b>
	<b>67.2 tons/yr</b>	<b>47.0 tons/yr</b>

<b>Control Efficiency=</b>	<b>99.984%</b>
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<b>Controlled Emissions =</b>	<b>0.002 lb/hr</b>
	<b>0.011 ton/yr</b>

**METHODOLOGY**

Emission Factors from STAPPA/ALAPCO "Air Quality Permits", Vol. I, Section 3 "Abrasive Blasting" (1991 edition)

Ton/yr = lb/hr X 8760 hr/yr X ton/2000 lbs

Flow Rate (FR) (lb/hr) = FR1 x (ID/ID1)2 x (D/D1)

E = EF x FR x (1-w/200) x N

w should be entered in as a whole number (if w is 50%, enter 50)

**Tank Emission Calculations  
Bulk POL System**

**Company Name:** Grissom Air Reserve Base  
**Plant Location:** Grissom Air Reserve Base, Grissom, IN 46971-5000  
**County:** Miami  
**FESOP:** F 103-13875  
**Plt ID:** 103-00008  
**Permit Reviewer:** CarrieAnn Ortolani  
**Date:** February 7, 2001

**External Floating Roof Storage Tanks**

**Lr**

**Rim Seal Loss**

Tank ID	Product Stored	Kra zero wind speed rim seal loss (lb-mole/ft-yr)	Krb w. s. dependent rim seal loss (lb-mole/ft-yr)	v Avg. wind speed (mph)	n wind speed exponent	D tank diameter (feet)	Pva Avg. Pressure	Pressure Factor (P*)	Vapor Mol. Weight (Mv) (lb/lb-mole)	Product Factor (Kc)	Lr Rim Seam Loss (lbs/yr)
400	JP-8	5.8	0.3	10	2.1	47.5	0.011	0.00019	130	1	50.3
401	JP-8	5.8	0.3	10	2.1	47.5	0.011	0.00019	130	1	50.3
402	JP-8	5.8	0.3	10	2.1	47.5	0.011	0.00019	130	1	50.3
403	JP-8	5.8	0.3	10	2.1	47.5	0.011	0.00019	130	1	50.3
406	JP-8	5.8	0.3	10	2.1	84.5	0.011	0.00019	130	1	89.6

**Lwd, Withdrawal Loss**

Tank ID	Product Stored	Q Annual Throughput (bbl/yr)	C Shell Clingage Factor (bbl/1000cub.ft)	WI Avg. liq. density (lb/gal)	D tank diameter (feet)	Nc No. fixed roof columns	Fc Column diameter (feet)	Lwd Withdrawal Loss (lbs/yr)
400	JP-8	120.2	0.6	7	47.5	0	0	10.0
401	JP-8	120.2	0.6	7	47.5	0	0	10.0
402	JP-8	120.2	0.6	7	47.5	0	0	10.0
403	JP-8	120.2	0.6	7	47.5	0	0	10.0
406	JP-8	120.2	0.6	7	84.5	0	0	5.63

**Lf**

**Deck Fitting Loss**

Tank ID	Product Stored	Ff Total Deck Fitting Loss factor (lb-mole/yr)	Pva Avg. Pressure	Pressure Factor (P*)	Vapor Mol. Weight (Mv) (lb/lb-mole)	Product Factor (Kc)	Lf Deck Fitting Loss (lbs/yr)
400	JP-8	0.497	0.011	0.00019	130	1	0.012
401	JP-8	0.497	0.011	0.00019	130	1	0.012
402	JP-8	0.497	0.011	0.00019	130	1	0.012
403	JP-8	0.497	0.011	0.00019	130	1	0.012
406	JP-8	0.497	0.011	0.00019	130	1	0.012

**Ld**

**Deck Seam Loss**

Tank ID	Product Stored	Kd Deck seam loss per unit seam length factor (lb-mole/ft-yr)	Sd Deck seam length factor (ft/sq.ft.)	D tank diameter (feet)	Pva Avg. Pressure	Pressure Factor (P*)	Vapor Mol. Weight (Mv) (lb/lb-mole)	Product Factor (Kc)	Ld Deck Seam Loss (lbs/yr)
400	JP-8	0.14	0.2	47.5	0.011	0.00019	130	1	1.54
401	JP-8	0.14	0.2	47.5	0.011	0.00019	130	1	1.54
402	JP-8	0.14	0.2	47.5	0.011	0.00019	130	1	1.54
403	JP-8	0.14	0.2	47.5	0.011	0.00019	130	1	1.54
406	JP-8	0.14	0.2	84.5	0.011	0.00019	130	1	4.86

Tank ID	Product Stored	Lr Rim Seam Loss (lbs/yr)	Lwd Withdrawal Loss (lbs/yr)	Lf Deck Fitting Loss (lbs/yr)	Ld Deck Seam Loss (lbs/yr)	Lt Total Loss (lbs/yr)	Lt Total Loss (tons/yr)
400	JP-8	50.3	10.0	0.012	1.54	61.9	0.031
401	JP-8	50.3	10.0	0.012	1.54	61.9	0.031
402	JP-8	50.3	10.0	0.012	1.54	61.9	0.031
403	JP-8	50.3	10.0	0.012	1.54	61.9	0.031
406	JP-8	89.6	5.63	0.012	4.86	100	0.050
<b>Total VOC emissions:</b>						<b>348</b>	<b>0.174</b>

**Fixed Roof Storage Tanks**

Tank ID	Product Stored	Vapor Space Volume (Vv) (cf)	Vapor Density (Wv) (lb/cf)	Vapor Space Expansion Factor (Ke)	Vented Vapor Saturation Factor (Ks)	Standing Loss (Ls) (lbs/yr)
381	propylene glycol/water	2147	0.00002	0.067	0.999	1.20
382	propylene glycol/water	2147	0.00002	0.067	0.999	1.20

Tank ID	Product Stored	Vapor Density (Mv) (lb/lb-mol)	Average Vapor Pressure (Pva) (psia)	Annual Throughput (Q) (bbl/yr)	Turnover Factor (Kn)	Working Loss Product Factor (Kp)	Working Loss (Lw) (lbs/yr)
381	propylene glycol/water	76.1	0.0016	317.5	1	1	0.037
382	propylene glycol/water	76.1	0.0016	317.5	1	1	0.037
736-1	JP-8	130	0.01	57767	0.785	1	64.9
736-2	JP-8	130	0.01	57767	0.785	1	64.9
736-3	JP-8	130	0.01	57767	0.785	1	64.9
736-4	JP-8	130	0.01	57767	0.785	1	64.9
736-5	JP-8	130	0.01	57767	0.785	1	64.9
736-6	JP-8	130	0.01	57767	0.785	1	64.9

Tank ID	Product Stored	Standing Loss (Ls) (lbs/yr)	Working Loss (Lw) (lbs/yr)	Total Loss (Lt) (lbs/yr)	Total Loss (Lt) (tons/yr)
381	propylene glycol/water	1.20	0.037	1.24	0.0006
382	propylene glycol/water	1.20	0.037	1.24	0.0006
736-1	JP-8	0.00	64.9	64.9	0.032
736-2	JP-8	0.00	64.9	64.9	0.032
736-3	JP-8	0.00	64.9	64.9	0.032
736-4	JP-8	0.00	64.9	64.9	0.032
736-5	JP-8	0.00	64.9	64.9	0.032
736-6	JP-8	0.00	64.9	64.9	0.032
<b>Total VOC emissions:</b>				<b>392</b>	<b>0.196</b>

**Methodology**

Emissions calculated based on AP-42, Chapter 7

**External Floating Roof Tanks**

$$Lr = (Kra + Krb \times v^n) \times D \times P^* \times Mv \times Kc$$

$$Lwd = [(0.943 \times Q \times C \times Wl)/D] \times [1 + (Nc \times Fc/D)]$$

$$Lf = Ff \times P^* \times Mv \times Kc$$

$$Ld = Kd \times Sd \times D^2 \times P^* \times Mv \times Kc$$

$$Lt = Lr + Lwd + Lf + Ld$$

**Fixed Roof Tanks**

$$Ls = 365 \times Vv \times Wv \times Ke \times Ks$$

$$Lw = 0.0010 \times Mv \times Pva \times Q \times Kn \times Kp$$

$$Lt = Ls + Lw$$

All variables were calculated based on AP-42 and the data supplied by the applicant



**Appendix A: Emissions Calculations**  
**Natural Gas Combustion Only**  
**MM BTU/HR <100**  
**Small Industrial Boilers**

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**Company Name:** Grissom Air Reserve Base  
**Address City IN Zip:** Grissom Air Reserve Base, Grissom, IN 46971-5000  
**FESOP:** F 103-13875  
**Plt ID:** 103-00008  
**Reviewer:** CarrieAnn Ortolani  
**Date:** February 7, 2001

**Boiler B592**  
Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

5.02

44.0

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0	5.5	84.0
				**see below		
Potential Emission in tons/yr	0.042	0.167	0.013	2.20	0.121	1.85

\*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Boiler 591a**  
Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

2.049

17.95

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0	5.5	84.0
				**see below		
Potential Emission in tons/yr	0.017	0.068	0.005	0.897	0.049	0.754

\*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Boiler 600a**  
Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

2.025

17.74

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0	5.5	84.0
				**see below		
Potential Emission in tons/yr	0.017	0.067	0.005	0.887	0.049	0.745

\*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

See page 6 for HAPs emissions calculations.

Appendix A: Emissions Calculations  
 Natural Gas Combustion Only  
 MM BTU/HR <100  
 Small Industrial Boiler  
 HAPs Emissions

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Company Name: Grissom Air Reserve Base  
 Address City IN Zip: Grissom Air Reserve Base, Grissom, IN 46971-5000  
 FESOP: F 103-13875  
 Plt ID: 103-00008  
 Reviewer: CarrieAnn Ortolani  
 Date: February 7, 2001

HAPs - Organics

Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	8.36E-05	4.78E-05	2.99E-03	7.17E-02	1.35E-04

HAPs - Metals

Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03	<b>Total HAPs</b>
Potential Emission in tons/yr	1.99E-05	4.38E-05	5.58E-05	1.51E-05	8.36E-05	<b>0.075</b>

Methodology is the same as page 5.

The five highest organic and metal HAPs emission factors are provided above.  
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**Appendix A: Emissions Calculations** Page 7 of 9 TSD App A  
**Commercial/Institutional/Residential Combustors (< 100 mmBtu/hr)**  
**#1 and #2 Fuel Oil**

**Company Name:** Grissom Air Reserve Base  
**Address City IN Zip:** Grissom Air Reserve Base, Grissom, IN 46971-5000  
**FESOP:** F 103-13875  
**Plt ID:** 103-00008  
**Reviewer:** CarrieAnn Ortolani  
**Date:** February 7, 2001

**Boiler B592**

Heat Input Capacity                      Potential Throughput                      S = Weight % Sulfur  
MMBtu/hr                                      kgals/year                                      0.5

6.29

394

Emission Factor in lb/kgal	Pollutant				
	PM*	SO2	NOx	VOC	CO
	2.0	71 (142.0S)	20.0	0.34	5.0
Potential Emission in tons/yr	0.394	14.0	3.94	0.067	0.984

**Boiler 591a**

Heat Input Capacity                      Potential Throughput                      S = Weight % Sulfur  
MMBtu/hr                                      kgals/year                                      0.5

1.988

124

Emission Factor in lb/kgal	Pollutant				
	PM*	SO2	NOx	VOC	CO
	2.0	71 (142.0S)	20.0	0.34	5.0
Potential Emission in tons/yr	0.124	4.42	1.24	0.021	0.311

**Boiler 600a**

Heat Input Capacity                      Potential Throughput                      S = Weight % Sulfur  
MMBtu/hr                                      kgals/year                                      0.5

2.1

131.4

Emission Factor in lb/kgal	Pollutant				
	PM*	SO2	NOx	VOC	CO
	2.0	71 (142.0S)	20.0	0.34	5.0
Potential Emission in tons/yr	0.131	4.66	1.31	0.022	0.329

**Methodology**

1 gallon of No. 2 Fuel Oil has a heating value of 140,000 Btu

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.140 MM E

Emission Factors are from AP 42, Tables 1.3-1, 1.3-2, and 1.3-3 (SCC 1-03-005-01/02/03) Supplement E 9/98 (see erata file)

\*PM emission factor is filterable PM only. Condensable PM emission factor is 1.3 lb/kgal.

Emission (tons/yr) = Throughput (kgals/ yr) x Emission Factor (lb/kgal)/2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

See page 9 for HAPs emission calculations.

**Appendix A: Emissions Calculations** Page 8 of 9 TSD App A  
**Commercial/Institutional/Residential Combustors (< 100 mmBtu/hr)**  
**#1 and #2 Fuel Oil**  
**HAPs Emissions**

**Company Name:** Grissom Air Reserve Base  
**Address City IN Zip:** Grissom Air Reserve Base, Grissom, IN 46971-5000  
**FESOP:** F 103-13875  
**Plt ID:** 103-00008  
**Reviewer:** CarrieAnn Ortolani  
**Date:** February 7, 2001

HAPs - Metals

Emission Factor in lb/mmBtu	Arsenic 4.0E-06	Beryllium 3.0E-06	Cadmium 3.0E-06	Chromium 3.0E-06	Lead 9.0E-06
Potential Emission in tons/yr	1.82E-04	1.36E-04	1.36E-04	1.36E-04	4.09E-04

HAPs - Metals (continued)

Emission Factor in lb/mmBtu	Mercury 3.0E-06	Manganese 6.0E-06	Nickel 3.0E-06	Selenium 1.5E-05	<b>Total HAPs</b>
Potential Emission in tons/yr	1.36E-04	2.73E-04	1.36E-04	6.82E-04	<b>0.002</b>

**Methodology**

No data was available in AP-42 for organic HAPs.

Potential Emissions (tons/year) = Throughput (mmBtu/hr)\*Emission Factor (lb/mmBtu)\*8,760 hrs/yr / 2,000 lb/ton

**Appendix A: Emission Calculations**  
**LPG-Propane -Commercial Boilers**  
**(Heat input capacity: > .3 MMBtu/hr and < 10 MMBtu/hr)**

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**Company Name:** Grissom Air Reserve Base  
**Address City IN Zip:** Grissom Air Reserve Base, Grissom, IN 46971-5000  
**FESOP:** F 103-13875  
**Plt ID:** 103-00008  
**Reviewer:** CarrieAnn Ortolani  
**Date:** February 7, 2001

(LPG is used for back-up)

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
kgals/year

SO2 Emission factor = 0.10 x S

S = Sulfur Content = 0.15 grains/100ft<sup>3</sup>

2.025

194

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	0.4	0.4	0.015 (0.10S)	14.0	0.5 **TOC value	1.9
Potential Emission in tons/yr	0.039	0.039	0.001	1.36	0.048	0.184

\*PM emission factor is filterable PM only. PM10 emission factor is assumed to be the same as PM based on a footnote in Table 1.5-1, therefore PM10 is filterable only as well.

\*\*The VOC value given is TOC. The methane emission factor is 0.2 lb/kgal.

### Methodology

1 gallon of LPG has a heating value of 94,000 Btu

1 gallon of propane has a heating value of 91,500 Btu (use this to convert emission factors to an energy basis for propane)

(Source - AP-42 (Supplement B 10/96) page 1.5-1)

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.0915 MMBt

Emission Factors are from AP42 (Supplement B 10/96), Table 1.5-1 (SCC #1-02-010-02)

Emission (tons/yr) = Throughput (kgals/yr) x Emission Factor (lb/kgal) / 2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).